

**BY ORDER OF THE COMMANDER
AIR EDUCATION AND TRAINING
COMMAND**



**AIR FORCE INSTRUCTION 21-101
AIR EDUCATION AND TRAINING COMMAND
Supplement 1
21 FEBRUARY 2003**

Maintenance

**AEROSPACE EQUIPMENT MAINTENANCE
MANAGEMENT**

"HOLDOVER"

"The basic publication has changed; impact on supplemental information is under review by the OPR. Users should follow supplemental information that remains unaffected."

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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(CMSgt Mark McKeown)
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AFI 21-101, 1 October 2002, is supplemented as follows:

This supplement applies to all AETC aircraft maintenance, trainer maintenance, and support equipment maintenance activities. It does not apply to Air Force Reserve Command or Air National Guard units. Maintain and dispose of records created as a result of processes prescribed in this publication in accordance with AFMAN 37-139, *Records Disposition Schedule*. Recommendations for change, improvement, or waivers to this instruction should be annotated on AETC Form 1236, **Request for Improving/Changing AETC Maintenance Regulations/Instructions**. Requests must be approved by the group commander (or squadron commander, if not assigned to a group) before forwarding to HQ AETC/LGMMP, 555 E Street East, Randolph AFB TX 78150-4440, for action by HQ AETC/LGM.

SUMMARY OF REVISIONS

This document is substantially revised and must be completely reviewed.

- 1.8.4.1. AETC focal points for contract and civil service aircraft and trainer maintenance programs are HQ AETC/LGP and HQ AETC/LGM.
- 1.8.4.2. Measurement areas and standards of performance are contained in the applicable contract.
- 1.8.4.3. AETCI 21-107, *Maintenance Management—Maintenance Contract Surveillance*, specifies the requirements for surveilling aircraft and trainer maintenance contracts.

1.8.4.5. AETCI 21-107 identifies the requirements and responsibilities for quality assurance evaluators (QAE) who surveil aircraft and trainer maintenance contracts.

1.8.5.2. The unit environmental coordinator will serve as the primary interface between the maintenance organization, the installation environmental flight, and the AETC unit maintenance group (MXG) environmental coordinator for all relevant environmental, safety, and occupational health (ESOH) issues.

1.8.5.3. (Added) (*Kirtland and Moody AFBs only*) Designate an MXG environmental coordinator focal point to guide and assist the AETC maintenance organization unit environmental coordinators in helping their units comply with the applicable environmental, safety, and occupational health (ESOH) standards and regulations (such as the AFI 32-70XX series instructions and AFPD 90-8, *Environmental, Safety, and Occupational Health*). The AETC tenant unit MXG environmental coordinator will lead the AETC unit Candidate Process analysis program and report status to the AETC/LG-EM Candidate Process program manager.

1.9. The AETC focal point is HQ AETC/LGMMQ.

1.12.1. Units are not required to develop OIs for programs that are not applicable to their unit (for example, high-speed taxi checks, emergency war orders [EWO] and combat turnaround).

1.12.3. (Added) **Contractor Regulations (CR)**. CRs are administrative or procedural in nature and apply solely to the maintenance complex. They are not published to change or supplement technical orders (TO). CRs must be forwarded to the chief QAE, functional director or commander, and administrative contracting officer (ACO) for review and acceptance prior to publication.

1.16. Units must submit waiver requests on AETC Form 1236 to HQ AETC/LGM.

1.17. Within AETC, at units with contract maintenance, the contract manager will ensure compliance with all responsibilities. At units with civil service maintenance, the civilian director of maintenance (DOM) or chief of maintenance will ensure compliance with these responsibilities.

1.17.1. (Added) AETC maintenance organizations include full contractor, partial contractor, full civil service, and military or military-civil service mix units. Contractor and civil service maintenance functions will be assigned to an organization as a unified function, as determined by the wing commander (that is, assigned under the wing or MXG commander). Specifics of the different types of maintenance organizations are as follows:

1.17.1.1. (Added) **Contractor**. (Contractor organizations encompass all types of contractors, including contract logistics support [CLS].) In the competitive sourcing process, each prospective contractor develops and submits an organizational structure in response to the government's request for proposals. Contractors will determine their optimum structure based on the requirements of the work statement. During the life of the contract, a contractor may make adjustments to the organizational structure and will notify the respective contracting officer as required by the specific contract. The logic and effectiveness of the organization is judged and scored by the source selection evaluation team as one of several factors used to select the successful bidder. When the contract is awarded, the organization specified in the winning proposal become the baseline. Unless a change is approved, the winning contractor is expected to implement the organizational structure as proposed.

NOTE: CLS contracts are centrally administered and managed by AFMC. In some cases, they may span multiple commands. CLS does not refer to either a type or level of maintenance, but to a source. CLS is a form of two-level maintenance, consisting of contractor support and depot support. Full CLS means a contractor performs all on- and off-equipment work and serves as the source of supply for a given weapon

system. In a partial CLS arrangement (such as that used on T-1, T-6, and T-43 aircraft), the contractor serves as a source of supply and off-equipment component repair for weapon system components.

1.17.1.2. (Added) **Civil Service.** As with a contract organization, a purely civil service organization is created in response to a request for proposal (RFP). Therefore, the most efficient organization (MEO) specified in the proposal becomes the baseline. MEOs are the result of the government bid being selected during competitive sourcing or, in some cases, direct conversion. Further information can be found in AFI 38-203, *Commercial Activities Program*, and OMB Circular A-76, *Performance of Commercial Activities*. A military-to-civilian conversion or a reengineered maintenance organization will use the initial statement of work (SOW) as a baseline for organization to enhance efficiencies in the conversion process. All other changes will be coordinated through the MXG commander.

1.17.1.3. (Added) **Military or Military-Civil Service Mix.** For military and/or civil service organizations, address variance requests as prescribed in AFI 38-101, *Air Force Organization*, Chapter 5.

1.19. For AETC training instructions, refer to AETCI 21-103, *AETC Military Aircraft Maintenance Training Program*, or AETCI 21-112, *AETC Civil Service and Contractor Aircraft Maintenance Training Programs*.

1.19.1. Refer to AETCI 21-103 or AETCI 21-112 (as applicable).

1.19.4.3.3. The AETC OPR is HQ AETC/LGMMR.

1.27.1.1. (Added) *(Luke and Tyndall AFBs only)* HQ AETC/LGMW provides each base a unit-committed munitions list (UCML) based on plans and munitions availability. The UCML is developed and distributed as a coordinated effort between HQ AETC/LGM and 19 AF/DO. HQ AETC/LGMW will review each UCML annually to determine if changes are required. Units must notify HQ AETC/LGMW of any significant mission, contingency tasking, or munitions changes that may affect the UCML.

1.27.1.2. (Added) *(Luke and Tyndall AFBs only)* Each unit will develop an appendix to the UCML that contains the conventional primary munitions (PM) and support munitions (SM) configurations to support load crew training and munitions and mobility training programs. Configurations will be consistent with the aircraft design operations capability statement and operational tasking. The appendix will be jointly developed by the wing weapons manager and the wing weapons and tactics function, coordinated with the MXG commander, approved by the wing commander, and then submitted by memorandum to HQ AETC/LGMW within 30 days after receipt of the UCML.

1.28. (Added) **Explosives Operations Training.** Maintenance training flights (MTF) will provide training to all personnel involved in explosives-loaded aircraft operations on the requirements of TO 11A-1-33, *Handling and Maintenance of Explosives Loaded Aircraft*. MTFs will provide initial training before personnel work on explosives-loaded aircraft and annually thereafter. **NOTE:** Every 2W0XX and 2W1XX person who has received weapons and explosives safety training from other sources (such as weapons academics or explosives safety training per AFI 91-202, *The US Air Force Mishap Prevention Program*) is exempt from this training.

1.29. (Added) **Equipment Maintenance:**

1.29.1. (Added) Equipment required to test, repair, or determine the serviceability of components is maintained and calibrated. Mockups, test stations, or locally built bench sets are maintained according to applicable technical orders (TO) for the major components. Unless otherwise prohibited by TOs, test station mockup components used for subassembly maintenance and calibration do not need to have all covers, panels, locknuts, etc., secured. However, covers, panels, attaching clamps, screws, etc., must be

readily available and subject to inspection at any time. Nonstocklisted parts or components of the mockup or set will be maintained by using the applicable general equipment TOs.

1.29.2. (Added) Portable and installed hoists will be visually inspected daily or prior to use (AFOSH Standard 91-46, *Materials Handling and Storage Equipment*). Authorized personnel will tag defective hoists with an AF Form 979, **Danger Tag**. The following procedures apply:

1.29.2.1. (Added) Inspect and weight test hoists and lifting devices according to AFOSH Standard 91-46, military specification, or inspection data provided by the manufacturer. Lifting devices not covered by military specification or manufacturer's data will be inspected and weight tested according to the following general maintenance and inspection guidance: AFOSH Standard 91-46; TO 35D6-1-106, *Periodic and Maintenance Instr—Aircraft and Engine Slings (General) and Restraining Devices*; or TO 35-1-246WC-1, *Periodic Inspection Workcards—Non-Powered Aerospace Ground Equipment Aircraft Servicing Equipment (FSC 1730) and Airfield Specialized Trucks and Trailers (FSC 1740)*.

1.29.2.2. (Added) Use AFTO Form 244, **Industrial/Support Equipment Record**, used to document special and periodic maintenance inspections, lubrications, and tests on nonreal property-installed hoists.

1.29.2.3. (Added) Properly maintain industrial shop machinery and equipment according to TO 34-1-3, *Inspection and Maintenance—Machinery and Shop Equipment*.

2.1. If one supervisory level is absent in the unit organization, the level above will assume the responsibilities of the missing level.

NOTE. Civil service equivalents are as follows: SSgt—GS-5, WS-3, WL-5, WG-8, or higher; MSgt—GS-8, WS-6, WL-8, WG-10, or higher; and CMSgt/maintenance officer—GS-9, WS-10, WG-15, or higher. Air Force specialty code (AFSC) level equivalents are as follows: 5-skill level—GS-4, WL-4, WG-7, servicer, worker, or higher; 7-skill level—GS-6, WS-3, WL-6, WG-10, mechanic, or higher.

2.2.10. (Added) Assigns a historical property custodian (HPC) to ensure proper preservation, inspection, and maintenance are done on all historic static display aerospace equipment (AFI 84-103, *U.S. Air Force Heritage Program*). The HPC will coordinate with wing maintenance activities to provide physical upkeep and repair as required. Historical static display equipment must not be allowed to deteriorate because of vandalism or lack of attention.

2.3.1.7. The MXG/CC will publish maintenance operating instructions (MOI) or wing instructions to outline vehicle control programs and identify vehicle control officers (VCO). VCOs will:

2.3.1.7.1. (Added) Allocate and maintain the status of all vehicles.

2.3.1.7.2. (Added) Negotiate with the transportation function for replacement vehicles as necessary.

2.3.1.7.3. (Added) Ensure radio-equipped vehicles assigned to maintenance are clearly identified to indicate the activity to which they are assigned. Use abbreviated call signs (for example, Talon 1, Blue 3, Bravo Super, or Golf). **NOTE:** This is optional for contractor-owned vehicles.

2.3.1.7.4. (Added) Ensure the transportation vehicle maintenance flight validates any modifications to the existing vehicle configuration prior to any modification taking place. **NOTE:** Adding special equipment (hitches, camper shells, pintle hooks, mirrors, etc.) or commercial options is not a modification and must be approved in writing by the transportation flight prior to procurement. Based on mission needs, hold installation of such items to a minimum.

2.3.1.47. The unit environmental coordinator will serve as the primary interface between the maintenance organization, the installation environmental flight, and the AETC unit MXG environmental coordinator for all relevant ESOH issues.

2.3.1.47.1. (Added) (*Kirtland and Moody AFBs only*) Designate an MXG environmental coordinator focal point to guide and assist the AETC maintenance organization unit environmental coordinators in helping their units comply with the applicable ESOH standards and regulations (such as the AFI 32-70XX series instructions and AFD 90-8). The AETC tenant unit MXG environmental coordinator will lead the AETC unit Candidate Process analysis program and report status to the AETC/LG-EM Candidate Process program manager.

2.3.1.69. Provide data, as required, on system utilization and operational usage through the lead command to the AFMC system program director, Aircraft Structural Integrity Program (ASIP) manager.

2.3.1.78. Develop an MOI, if necessary, for helicopter flight control rigging requirements and identify individuals certified for flight control rigging on the special certification roster (SCR).

2.3.1.85. (Added) Establish MOIs or wing instructions to specify local requirements or restrictions to aircraft towing procedures if required. The only special purpose vehicles authorized to tow aircraft are properly equipped MB-2, U-30, MB4, flight line tow tractor (bobtail), and 4,000-pound warehouse tow tractors (prime national stock number [NSN] 3930-01-007-0115). The use of general purpose vehicles (for example, pickup trucks, step vans, aerospace ground equipment [AGE] tow tractors) to tow aircraft is not authorized. **EXCEPTION:** Properly equipped general purpose vehicles may be used to tow small trainer-type aircraft during emergency situations at auxiliary fields only.

2.3.1.85.1. (Added) A two-person tow team (driver and brake rider) is authorized for T-37, T-38, and T-6 aircraft during daylight hours. If used, the towing operation must be under the supervision of a fully qualified towing supervisor who is also a qualified tow vehicle operator. Established taxi lanes and parking areas with nose-wheel guide lines designed for the particular MDS must also be used.

2.6.22.1. (Added) HQ AETC/LG-EM is the POC for identifying, developing, and maintaining ESOH training programs.

2.6.22.2. (Added) The unit environmental coordinator, with the support of the MXG environmental coordinator, will:

2.6.22.2.1. (Added) Familiarize all new personnel with applicable regulatory and command environmental policies (such as local, state, etc.).

2.6.22.2.2. (Added) Assist the MTF with coordinating, monitoring, and administering ESOH training programs.

2.6.52. The unit environmental coordinator will monitor and assist the organization in ensuring ESOH compliance.

2.7.16. Ensure personnel are trained and certified to perform tasks requiring special qualification (AETCI 21-103 and/or the applicable contract).

2.7.18. Ensure a graduate assessment survey (GAS) is used to provide positive and negative feedback to AETC and other commands that conduct education and training courses (AFI 36-2201, Volume 3, *Air Force Training Program On the Job Training Administration*, and AETCI 36-2201, *Training Evaluation*).

2.7.27. (Added) Comply with AFI 21-103/AETC Sup 1, *Equipment Inventory, Status, and Utilization Reporting*, for aircraft equipment accountability.

3.3.10. The AETC POC is HQ AETC/LGMMMA. Refer to AETCI 21-105, *Logistics Performance Measures Reporting Procedures*.

3.3.12.3. (Added) Ensures timely accomplishment of periodic maintenance (PE) on Centralized Aircraft Support System (CASS) equipment.

3.3.12.4. (Added) Ensures the status of CASS equipment is maintained in the maintenance information system (MIS). A status board may also be used.

3.3.12.5. (Added) Informs the Maintenance Operations Center (MOC) and production superintendent of status changes to CASS equipment that affect the ability of CASS to support the mission.

3.3.12.6. (Added) Ensures CASS is placed in standby mode when flying is delayed or canceled.

3.3.12.7. (Added) Establishes a CASS equipment corrosion control and paint program and updates requirements annually.

3.8. Aircrews, for all aircraft status codes (code 1, 2, 3, 4, and 5), will notify the MOC of aircraft status by ultra high frequency (UHF) radio transmission or a direct line from operations prior to arrival. Undergraduate pilot training (UPT) or specialized undergraduate pilot training (SUPT) units need not relay code 1 and 2 status to maintenance prior to arrival. In case of a ground abort, the aircrew will make the AFTO Form 781A, **Maintenance Discrepancy and Work Document**, writeup on the abort and move to the spare aircraft, if available. Maintenance will then debrief the aircraft with the maintenance debrief personnel. If a spare aircraft is not available, the aircrew will debrief the aircraft with the debrief personnel.

3.8.1. Aircrews will input all required debrief data when using the Computerized Fault Reporting System (CFRS).

3.10.6.7. (Added) Establish trim teams when necessary.

3.10.6.8. (Added) Ensure Core Automated Maintenance System (CAMS) event identifications (ID) with a Y in the automated history event (AHE) indicator field are initiated for engines removed for maintenance or inspection and maintained for each installed engine. For engine maintenance actions accomplished on transient aircraft, notify the engine management section.

3.10.6.9. (Added) Ensure personnel inform the engine management section and oil analysis program (OAP) laboratories of engine removal.

3.10.6.10. (Added) Ensure personnel chemically clean and water wash installed engines as required by lead command directives or equipment TOs. When required, enter and maintain frequencies of treatment and times in the MIS and on AFTO Form 781K, **Aerospace Vehicle Inspection, Engine Data, Calendar Inspection and Delayed Discrepancy**.

3.10.6.11. (Added) Ensure intermediate-level maintenance of TF39 two-level maintenance (2LM) engines is limited to changing and/or repairing all externally mounted quick engine change (QEC) kit and basic engine components (except the gearbox).

3.10.6.12. (Added) Ensure intermediate-level maintenance of T56 2LM engines is limited to reduction gearbox, accessories-drive housing, and turbine and external mount components. **NOTE:** QEC removal is not an intermediate-level maintenance, 2LM task.

3.11. In AETC, military (bluesuit) units are responsible for weapons section chief, weapons loading element, and weapons maintenance element responsibilities outlined in AFI 21-101 and this supplement. The Kirtland AFB weapons section is also responsible for applicable armament and weapons task qualification responsibilities. Only military units are bound to the organizational requirements of AFI 21-101 and this supplement. Contract and civil service units will be organized according to their respective contract. Only units that load munitions requiring certification must maintain a weapons standardization program. **NOTE:** See paragraph 3.11.6. (Added) for contract weapons and armament function responsibilities.

3.11.1.12. Refer to paragraph 4.8.6.6. of this supplement for specific guidance on locally manufactured equipment (LME).

3.11.1.34. (Added) Identify load crews for primary and alternate mobility positions, as applicable.

3.11.1.35. (Added) Monitor weapons release reliability rates and gunfire-out rates and provide monthly performance levels to the wing weapons manager. Take appropriate corrective action and inform the weapons manager if rates fall below command performance levels.

3.11.1.36. (Added) At least weekly, print and review job flow inquiries to ensure required inspections are being scheduled and completed. Maintain these products on file until replaced.

3.11.1.37. (Added) Designate munitions account custodians for impulse cartridges, dummy ammunition, etc., if applicable. Ensure storage facilities are maintained according to AFMAN 91-201, *Explosives Safety Standards*, and AFI 31-101, *The Air Force Installation Security Program*.

3.11.1.38. (Added) Coordinate with the munitions activity on the establishment of a wing instruction for accountability of munitions identified to meet flight line requirements.

3.11.1.39. (Added) Ensure flying schedule changes that affect the munitions activity are coordinated with the munitions activity.

3.11.1.40. (Added) Ensure AF Form 2430, **Specialist Dispatch Control Log** (or a locally produced form or product), is used to dispatch and track armament systems maintenance and loading operations. Ensure that serial numbers of alternate mission equipment (AME) or normally installed equipment (NIE) installed or removed on aircraft are recorded and that completed forms or products are kept on file for at least 90 days.

3.11.1.41. (Added) Ensure proper job data documentation (JDD) procedures are used to install and remove all AME and NIE in the MIS. Proper JDD procedures are interpreted as creating and clearing jobs in the MIS.

3.11.1.42. (Added) Designate supervisors authorized to use non-JDD procedures (CAMS screens 45 and 46) in the MIS. Limit the number of supervisors authorized to use these screens to the minimal number needed to ensure timely documentation.

3.11.2.5. (Added) Ensure load crews are certified before loading conventional munitions requiring certification unless crews are under the direct supervision of at least two certifying officials.

3.11.3. Senior airmen required to perform load crew chief duties must be designated in writing by the wing weapons manager.

3.11.4.9. (Added) Perform the on-equipment portions of aircraft armament equipment transfer and acceptance inspections. Inspections will include a parts integrity inspection (to ensure equipment serial num-

bers match records received) and a complete electrical and mechanical checkout of every installed NIE and AME. The armament flight will review equipment historical records. **NOTE:** Installed equipment (NIE or AME) need not be removed for acceptance or transfer inspections unless a malfunction, defect, overdue inspection, or a discrepancy requiring removal is detected.

3.11.5.5.1. Record by serial number and location (or position) all armament-related AME or support equipment (SE) from which munitions are expended or rounds fired and record the action in the MIS (for example, rounds totalization, 30 days after fire, or 100 firing inspections). Equipment serial numbers for items not requiring records action do not need to be recorded. An AF Form 2434, **Munitions Configuration and Expenditure Document**, is not required for aircraft loaded for alert or exercises not involving flight. Locally developed forms or products may be used if they are coordinated through the munitions activity and approved by the MXG commander.

3.11.5.5.2. At Kirtland AFB, the reconciliation may be performed the first duty day *after* the flying day provided the reconciliation is completed before the next day's flying commences. Use AF Form 2434 to update inspection cycles of AME, NIE, and SE as applicable. When expenditures occur, provide a copy to the armament flight and/or the squadron plans, scheduling, and documentation (PS&D) section for update of applicable inspection intervals and equipment historical records.

3.11.6. (Added) **Contracted Weapons Function.** Paragraphs **3.11.6. (Added)** through 3.11.6.46.4.1 (Added) provide all the weapons and armament responsibilities for contract and civil service weapons functions in AETC, to include all applicable portions of Chapters 3, 6, and 16 from AFI 21-101. AT-38 weapons functions will perform on- and off-equipment weapons-related scheduled and unscheduled maintenance. The contracted armament systems function at Tyndall AFB is only responsible for the off-equipment maintenance requirements listed on these paragraphs. **NOTE:** Contract organizations are not bound to the organizational requirements of AFI 21-101 and this supplement. They are organized according to their respective contract.

3.11.6.1. (Added) (*AT-38 units only*) Load and unload munitions and weapons in support of daily and contingency operations.

3.11.6.2. (Added) (*AT-38 units only*) Monitor weapons release reliability rates and take appropriate corrective action when rates fall below command performance levels. Calculate the weapons release reliability rate by dividing the number of successful releases by the number of attempts. Command performance levels are 99 percent for weapons release and 98 percent for gunfire-out rates. Provide monthly performance levels to the quality assurance (QA) office for inclusion in the quality assurance program (QAP) summary and, if required, to the analysis function for inclusion in the monthly maintenance summaries.

3.11.6.3. (Added) (*AT-38 units only*) Develop a wing instruction or MOI, in coordination with the explosive safety officer and airfield management, for launch and recovery of explosives-loaded aircraft (AFMAN 91-201 and AFI 91-202). The wing instruction or MOI will include the requirements to arm and de-arm munitions loaded on aircraft only in approved areas, normally safe guns and rockets in the de-arm area before the aircraft returns to the parking area, inspect and safe unexpended munitions before the aircraft returns to the parking area, and isolate aircraft with unsafe or hung munitions until munitions are safed.

3.11.6.4. (Added) (*AT-38 units only*) Track the configuration of aircraft, suspension equipment, and weapons. Track NIE and assigned in-use AME by aircraft tail number and position installed in the MIS.

3.11.6.5. (Added) *(AT-38 units only)* Inform the flight line expediter of all status changes, delays, and extensions. Coordinate the accomplishment of all preplanned and unscheduled maintenance requirements and inspections with the flight line expediter.

3.11.6.6. (Added) *(AT-38 units only)* Ensure the MOC is aware of the delivery and pickup of the munitions items.

3.11.6.7. (Added) *(AT-38 units only)* Monitor the safety of flight line weapons operations. Ensure supervisory post load and maintenance inspections are performed.

3.11.6.8. (Added) *(AT-38 units only)* Install and remove AME and NIE to facilitate other maintenance or for repair actions, including acceptance, transfer, phase, and hourly post flight (HPO) inspections.

3.11.6.9. (Added) Perform on- and off-equipment -6 inspections and time compliance technical order (TCTO) aircraft armament systems functional checks on AME and NIE. At least weekly, print and review job flow inquiries to ensure required inspections are being scheduled and completed. Maintain these products on file until replaced. (Tyndall AFB is only responsible for the off-equipment requirements.)

3.11.6.10. (Added) *(AT-38 units only)* Perform aircraft troubleshooting and repair actions as required. Ensure appropriate followup actions are accomplished for all armament systems malfunctions. Monitor repair actions taken by supporting agencies on dispensers, suspension equipment, training munitions, etc., that were involved in specific system malfunctions.

3.11.6.11. (Added) *(AT-38 units only)* Establish local procedures to control impulse cartridges from transient aircraft, if applicable. Air Force specialty code (AFSC) 2W1X1 personnel or civilian equivalents may perform arming, de-arming, and munitions loading or unloading operations on transient aircraft and munitions for which they are qualified on. The MXG commander may, however, direct AFSC 2W1X1 personnel (minimum 5-skill level and explosive safety qualified) or civilian equivalents to arm or de-arm an aircraft on which they are not qualified if technical data is available. The aircrew should be available for consultation on aircraft peculiarities. If these requirements cannot be met, request help from HQ AETC/LGMW.

3.11.6.12. (Added) *(AT-38 units only)* Designate munitions account custodians for impulse cartridges, dummy ammunition, etc., if applicable. Ensure storage facilities are maintained according to AFMAN 91-201 and AFI 31-101.

3.11.6.13. (Added) *(AT-38 units only)* Coordinate with the munitions activity to establish a wing instruction for accountability of munitions identified to meet flight line requirements.

3.11.6.14. (Added) *(AT-38 units only)* Use AF Form 2430 (or a locally produced form or product) to dispatch and track armament systems maintenance and loading operations. Record the serial numbers of AME or NIE installed on or removed from aircraft. Keep completed forms or products on file for at least 90 days.

3.11.6.15. (Added) Use proper JDD procedures to install and remove all AME and NIE in the MIS. **NOTE:** Proper JDD procedures are interpreted as creating and clearing jobs in the MIS.

3.11.6.16. (Added) Designate and authorize a select number of supervisors to use non-JDD procedures (CAMS screens 45 and 46) in the MIS. Limit the supervisors authorized to use these screens to the minimal number needed to ensure timely documentation.

3.11.6.17. (Added) Perform the on- and off-equipment portions of aircraft armament equipment transfer and acceptance inspections. As a minimum, inspections will include a parts integrity inspection (to ensure

equipment serial numbers match the records received), a review of historical records for all AME and NIE, and a complete electrical and mechanical checkout of every installed NIE and AME. **NOTE:** Installed equipment (NIE or AME) need not be removed for acceptance or transfer inspections unless a malfunction, defect, overdue inspection, or a discrepancy requiring removal is detected.

3.11.6.18. (Added) (*AT-38 units only*) Ensure local munitions expenditure tracking procedures meet the following minimum requirements:

3.11.6.18.1. (Added) Maintain AF Forms 2434 to reflect all aircraft configured and loaded to release or fire munitions. Record by serial number and location (or position) all armament-related AME or SE from which munitions are expended or rounds fired and record the action in the MIS (for example, rounds totalization, 30 days after fire, or 100 firing inspections). Equipment serial numbers for items not requiring records action need not be recorded. **NOTE:** An AF Form 2434 is not required for aircraft loaded for alert or exercises not involving flight.

3.11.6.18.2. (Added) Locally developed forms or products may be used if they are coordinated through the munitions activity and approved by the MXG commander.

3.11.6.18.3. (Added) Accomplish a reconciliation of expenditures at the end of the flying day. (**NOTE:** It must be completed before the next day's flying commences.) Accomplish a complete reconciliation with the munitions activity no later than the end of the last flying day of the flying week. Provide the munitions activity a copy of the AF Form 2434. After the reconciliation, use AF Form 2434 to update inspection cycles of AME, NIE, and SE as applicable. When expenditures occur, provide a copy to the armament flight and/or the squadron PS&D section to update applicable inspection intervals and equipment historical records. Annotate the documentation action block when entries are made on item historical documents.

3.11.6.19. (Added) If applicable, establish gun room security and safety procedures, including explosive licenses, if required (AFMAN 91-201 and AFI 31-101).

3.11.6.20. (Added) Follow accountability and control requirements for AME, equipment, supply point, and special purpose recoverables authorized maintenance (SPRAM) (AFI 21-103 and AFMAN 23-110, Volume 2, *USAF Supply Manual*, Part 13).

3.11.6.21. (Added) Identify to base supply (by national stock number [NSN]) all armament systems items requiring functional and/or acceptance inspection (AFMAN 23-110, Volume 2).

3.11.6.22. (Added) (*AT-38 units only*) Ensure PS&D is aware of all applicable -6 TOs and other armament inspections. (PS&D is responsible for all applicable scheduling functions.)

3.11.6.23. (Added) As applicable, manage assets through the repair cycle.

3.11.6.24. (Added) (*Tyndall AFB only*) Maintain and inspect ammunition loading assemblies and/or systems. The munitions activity is responsible for the chassis, to include the rear deck and cover.

3.11.6.25. (Added) Maintain equipment historical records, using AFTO Form 95, **Significant Historical Data**, or approved automated product, for armament AME, NIE, aircraft guns and, if applicable, ammunition loading systems (TO 00-20-5, *Aerospace Vehicle Inspection and Documentation*). Develop a listing of significant maintenance actions requiring entry by the work center that are not specifically mentioned in TO 00-20-5. Maintain a current printed copy of automated histories on file for ready reference and backup.

3.11.6.26. (Added) Account for, store, and control AME.

3.11.6.27. (Added) Manage equipment onhand levels in accordance with applicable allowance standards and -21 TOs. **NOTE:** Units possessing equipment authorized by -21 TOs or allowance standards, but not required by the unit, may request disposition instructions from HQ AETC/LGMW. Additionally, units requiring equipment in excess of their authorizations will coordinate requests for increases through HQ AETC/LGMW.

3.11.6.28. (Added) List assets as SPRAM as required.

3.11.6.29. (Added) If applicable, develop and implement a program for documenting issues and receipts of in-use AME.

3.11.6.30. (Added) If established, manage forward supply points according to AFMAN 23-110, Volume 2.

3.11.6.31. (Added) *(Tyndall AFB only)* Monitor AME in-commission rates monthly. Command performance level for AME in-commission is 90 percent; take corrective action when rates fall below this level. Calculate rates by the type of equipment in their functional configuration; for example, a pylon with a bomb rack installed and a missile launcher with a remote interface unit installed are considered one item for measuring purposes. Equipment is considered in-commission if there are no discrepancies or parts required (to include TCTOs) that would hinder performance of the intended function. **NOTE:** Equipment is not considered out of commission just because it is undergoing scheduled, preventative, or minor maintenance.

3.11.6.32. (Added) *(Tyndall AFB only)* Develop long range, monthly, and weekly plans and identify all inspections, TCTOs, and other maintenance requirements (or equipment usage) in a format that depicts required actions by day, equipment type, and serial number. **NOTE:** Plans and schedules are developed separately for each operations squadron or other customers supported. Plans and schedules may be developed on a single product, provided they distinguish between customers.

3.11.6.33. (Added) *(Tyndall AFB only)* Produce and deliver monthly armament plans to the appropriate PS&D by the third week of the preceding month for inclusion in the monthly maintenance plan.

3.11.6.34. (Added) *(Tyndall AFB only)* Produce and deliver a copy of the armament weekly schedule annex to the appropriate PS&D no later than 1200 on Wednesday of the week preceding the effective week.

3.11.6.35. (Added) *(Tyndall AFB only)* On approval of the weekly schedule, schedule all maintenance actions in the MIS.

3.11.6.36. (Added) *(Tyndall AFB only)* Maintain a current time distribution (TDI) product, or CAMS screen 469, for all armament-related job standards (JST) and desired MIS TCTO reports.

3.11.6.37. (Added) *(Tyndall AFB only)* Monitor inspection and time change subsystems of the MIS. Monthly review TDIs or CAMS screen 469 for all armament JSTs. As a minimum, review for overdue, missing, and excess inspections. Annotate discrepancies on the TDIs or CAMS screen 469 and provide a copy to the work center supervisor for correction and return. Maintain a file copy of the most current corrected copy of each TDI or CAMS screen 469.

3.11.6.38. (Added) *(Tyndall AFB only)* Manage the job standard master listing (JML) for all armament equipment in the MIS. Update the JML as inspection and time change requirements change. Semiannually, reconcile the JML with appropriate governing TOs to ensure inspections and time change frequencies are accurate. Document the reconciliation on a printed copy of the JML or a locally designed form or

product to include the date and name of the inspector. Retain this copy on file until it is replaced by the next reconciliation.

3.11.6.39. (Added) (*Tyndall AFB only*) Load applicable JSTs to armament equipment items during aircraft and/or equipment acceptance and receipts from supply or other sources.

3.11.6.40. (Added) (*Tyndall AFB only*) Requisition parts to satisfy time change requirements for armament equipment not identified in applicable -6 TOs.

3.11.6.41. (Added) (*Tyndall AFB only*) Manage TCTOs, command or local modifications, and one-time inspections (AFI 21-101).

3.11.6.42. (Added) (*Tyndall AFB only*) Provide the wing weapons manager armament tester and equipment status monthly.

3.11.6.43. (Added) (*AT-38 units only*) Develop, administer, and manage a weapons academic training program. Initial and recurring annual weapons academic training is required for all unit personnel performing weapons-related tasks or who maintain specific weapons task qualification. As a minimum, the program will include the following requirements:

3.11.6.43.1. (Added) Academic training is completed prior to starting practical training for weapons task qualification items.

3.11.6.43.2. (Added) Academic training course control documents are tailored to unit needs. As a minimum, courses will include publications, safety, security, aircraft familiarization, munitions, AGE and SE familiarization, test equipment, and special tools and handling equipment. **NOTE:** Weapons academic training may fulfill the requirements for explosive safety training if the requirements of AFI 91-202 are met.

3.11.6.44. (Added) (*AT-38 units only*) Designate weapons task qualification trainers.

3.11.6.45. (Added) (*AT-38 units only*) Establish and manage a weapons task qualification training program. A weapons task qualification is a munitions-related task that does not require certification. Ensure personnel receive required prerequisite training before entering weapons task qualification training (for example, cockpit familiarization, fire extinguisher, and AGE). The following requirements apply to the weapons task qualification training program:

3.11.6.45.1. (Added) Personnel will receive initial and annual recurring training for this type of operation. The weapons section will ensure personnel receive all academic and practical training, including explosive safety peculiar to weapons tasks.

3.11.6.45.2. (Added) Initial training will be conducted on properly configured aircraft suitable for use; no other maintenance will be performed on the aircraft during training. Annual recurring training may be conducted during normal flight line operations. Document training in the MIS. Weapons task qualification trainers will be fully qualified AFSC 2W151s or civilian equivalents. **NOTE:** Each weapons task qualification item uses a separate course code.

3.11.6.45.3. (Added) Personnel will be trained and qualified on using applicable checklists, performing applicable functional and/or stray voltage checks, and performing delayed flight and alert checks immediately before launch procedures, if applicable. Additionally, they will be trained on using, installing, and removing weapons system safety devices; using, installing, and removing munitions item safety requirements and devices; knowing the location of the weapons system explosive items used to jettison and/or release external stores; and knowing the location and safe configuration of cockpit armament switches.

3.11.6.45.4. (Added) The following minimum personnel requirements apply during training and the performance of each weapons task qualification:

3.11.6.45.4.1. (Added) Two or more qualified persons (at least one in AFSC 2W1X1 [or civilian equivalent] functioning as the supervisor) may install and remove impulse cartridges (if the task is not done as a part of a loading operation that requires certification) and load or unload BDU-33 and MK-106 practice bombs.

3.11.6.45.4.2. (Added) Two or more qualified persons in any maintenance AFSC, or civilian equivalent, may install and remove chaff and flare magazines and perform portions of the conventional loading checklist that pertain to delayed flight or alert, immediately prior to launch, and safing procedures. **NOTE:** For munitions requiring certification, both persons must possess AFSC 2W1X1 except during actual or exercise contingency operations.

3.16. In addition, refer to AETCI 21-104, *Aircraft Planning and Scheduling*.

4.3.5. Refer to Chapter 8 of this supplement for additional guidance.

4.4. If used, production superintendents within the MXS will be assigned to the maintenance squadron staff and report to the maintenance supervisor and maintenance superintendent.

4.6.3.2. Removes and replaces the drogue chutes, as applicable.

4.6.3.9. (Added) Ensures cartridge-actuated devices (CAD) and propellant-actuated devices (PAD) verification procedures are followed.

4.7.2.15. Provide this listing to HQ AETC/LGMTS.

4.7.4.1. Establish an AGE operator training program in coordination with the training management function. The program will include safety and operating procedures (AFOSH Standards 91-66, *General Industrial Operations*, and 91-100, *Aircraft Flight Line—Ground Operations and Activities*) and prior-to-use inspections (TO 00-20-5 and applicable equipment TOs). Qualified AGE personnel, instructors, or supervisors certified by the AGE function will provide the training. Coordinate with the training management function to schedule required training. On completion of training, an AF Form 2426, **Training Request and Completion Notification**, will be completed and sent to the training management function. The AGE function will determine if any other training is required when modifications to equipment or changes to TOs are made. (Specific training requirements are in AETCI 21-103 or AETCI 21-112, as applicable.)

4.7.6.3. Ensures an MOI, wing instruction, or support agreement is established that includes procedures for supporting deployed AGE at dispersed locations for other than contingencies.

4.7.8.1. Provides a reproducible copy of the AGE function monthly plan to PS&D by the third Tuesday of the month preceding the effective month.

4.7.8.1.2. (Added) Provides a legible copy of the AGE function weekly schedule annex to PS&D by 1200 on Thursday of the week preceding the effective week for inclusion into the weekly plan.

4.7.8.1.3. (Added) Schedules all required maintenance actions in the MIS once the weekly schedule is approved for inclusion into the upcoming weekly utilization and maintenance plan.

4.7.8.1.4. (Added) Monitors inspections and time change subsystems in the MIS. Quarterly, reviews TDI for all AGE JSTs for overdue, missing, and excess items and time changes. The scheduler will annotate discrepancies found on each time change item (TCI), and the AGE function supervisor will forward dis-

crepancies to the appropriate repair function for corrective action. When corrected, the repair function will return TDIs to AGE scheduling personnel, who will file the TDIs until they are replaced by the next quarterly review.

4.7.8.1.5. (Added) Maintains the JML for all AGE function equipment in the MIS. Updates the JML as inspection and time change requirements change in governing TOs. Semiannually, reconciles the JML with appropriate governing TOs to ensure inspections and time change frequencies are accurate. Documents the reconciliation on the working copy of the JML, to include the name of the individual accomplishing the reconciliation and the date completed. Files this documentation until replaced by the next reconciliation.

4.7.8.3. Requisitions parts to satisfy time change requirements for AGE components identified in the applicable TOs.

4.8.1. The armament function at Luke AFB is organized as an armament flight with maintenance, AME, and support sections. At Luke AFB, an AFSC 2R1X1 scheduler will be assigned. An AFSC 2S0X1 supply specialist and a 3A0X1 information management specialist may also be assigned. Unless the overall unit manning is inadequate to meet load crew standards, armament personnel will not be certified as load crewmembers. The armament function at Tyndall AFB is contracted; their armament responsibilities are contained exclusively in paragraph 3.11.6. (Added) of this supplement. At other contracted and civil service units, the weapons section is responsible for all applicable armament functions identified in paragraph 3.11.6. (Added) of this supplement. **NOTE:** Only military units are bound to the organizational requirements of AFI 21-101 and this supplement. Contract units will organize according to their respective contract.

4.8.3.16. (Added) Ensures proper JDD procedures are used as applicable. Proper JDD procedures are interpreted as creating and clearing jobs in the MIS.

4.8.3.17. (Added) If applicable, develops an MOI for in-shop handling and maintenance of jammed or broken guns, gun systems, and ammunition handling systems (AFMAN 91-201).

4.8.3.18. (Added) Determines the quantity of technicians and supervisors authorized to use CAMS screens 45 and 46 for making corrections to AME and NIE serially controlled subcomponents. **NOTE:** The quantity of personnel authorized to use these screens must be limited to the minimal number required to ensure timely documentation.

4.8.3.19. (Added) Ensures LME not included in technical data or the Air Force LME pamphlet is approved for use.

4.8.3.20. (Added) If established, manages forward supply points according to AFMAN 23-110, Volume 2.

4.8.4.1. Identifies all time change requirements for armament equipment not listed in -6 TOs to the applicable PS&D, if applicable.

4.8.4.6.4. (Added) Equipment received from supply or similar sources need only be inspected (disassembled to the point necessary) to ensure it meets the standards specified in the applicable TO. **NOTE:** Installed equipment (NIE or AME) need not be removed for acceptance or transfer inspections unless a malfunction, defect, overdue inspection, or discrepancy requiring removal is detected.

4.8.4.8. The munitions activity is responsible for the chassis, to include the rear deck.

4.8.4.14. (Added) *(Luke AFB only)* Monitors AME in-commission rates monthly. Take corrective action when rates fall below the command performance level for AME in commission, which is 90 percent. Calculates rates by the type of equipment in their functional configuration; for example, a pylon with a bomb rack installed and a missile launcher with a remote interface unit installed are considered one item for measuring purposes. Equipment is considered in commission if there are no discrepancies or parts required (to include TCTOs) that would hinder performance of the intended function. **NOTE:** Equipment is not considered out of commission just because it is undergoing scheduled, preventative, or minor maintenance.

4.8.4.15. (Added) *(Luke AFB only)* Develops plans and schedules separately for each operations squadron or other customers supported. **NOTE:** Plans and schedules may be developed on a single product, provided they distinguish between customers.

4.8.4.16. (Added) *(Luke AFB only)* Develops long range, monthly, and weekly plans and identifies all inspections, TCTOs, and other maintenance requirements (or equipment usage) in a format that depicts required actions by day, equipment type, and serial number.

4.8.4.17. (Added) *(Luke AFB only)* Coordinates with armament maintenance combat armament support team (CAST) chiefs and appropriate outside functions on scheduled maintenance requirements.

4.8.4.18. (Added) *(Luke AFB only)* Produces and delivers monthly armament plans to PS&D by the third week of the preceding month for inclusion in the monthly maintenance plan.

4.8.4.19. (Added) *(Luke AFB only)* Produces and delivers a copy of the armament weekly schedule annex to PS&D no later than 1200 on Wednesday of the week preceding the effective week.

4.8.4.20. (Added) *(Luke AFB only)* On approval of the weekly schedule, schedules all maintenance actions in the MIS.

4.8.4.21. (Added) *(Luke AFB only)* Maintains a current TDI product for all armament-related JSTs and desired MIS TCTO reports.

4.8.4.22. (Added) *(Luke AFB only)* Monitors inspection and time change subsystems of the MIS. Reviews TDIs monthly for all armament JSTs. As a minimum, reviews for overdue, missing, and excess inspections. Annotates discrepancies on the TDIs and provides a copy to the work center supervisor for correction and return. Maintains a file copy of the most current corrected copy of each TDI.

4.8.4.23. (Added) *(Luke AFB only)* Manages the JML for all armament equipment in the MIS. Updates the JML as inspection and time change requirements change. Semiannually, reconciles the JML with appropriate governing TOs to ensure inspections and time change frequencies are accurate. Documents the reconciliation on a printed copy of the JML, to include the date and name of the inspector. Retains this copy on file until it is replaced by the next reconciliation.

4.8.4.24. (Added) *(Luke AFB only)* Loads applicable JSTs to armament equipment items during aircraft and/or equipment acceptance and receipt from supply or other sources.

4.8.4.25. (Added) *(Luke AFB only)* Requisitions parts to satisfy time change requirements for armament equipment not identified in applicable -6 TOs.

4.8.4.26. (Added) *(Luke AFB only)* Manages TCTOs, command or local modifications, and one-time inspections (AFI 21-101).

4.8.4.27. (Added) (*Luke AFB only*) Provides the wing weapons manager with armament tester and equipment status monthly.

4.8.4.28. (Added) Ensures JDD procedures are used to install and remove all NIE in the MIS.

4.8.4.29. (Added) Ensures documentation in the MIS for AME routinely installed for periods longer than 30 days (such as the F-16 wingtip launchers and center line pylons) is accomplished, using the appropriate JDD. All other AME may be installed and removed, using non-JDD procedures (CAMS screens 45 and 46), if the actions are documented on AF Form 2430 or a similar product. **NOTE:** At Luke and Tyndall AFBs, the wing weapons manager will determine the AME to be documented, using JDD procedures.

4.8.5.6. (Added) Manages equipment onhand levels in accordance with applicable allowance standards and -21 TOs. **NOTE:** Units possessing equipment authorized by -21 TOs or allowance standards, but not required by the unit, may request disposition instructions from HQ AETC/LGMW. Additionally, units requiring equipment in excess of their authorizations will coordinate requests for increases through HQ AETC/LGMW.

4.8.5.7. (Added) Develops an MOI or wing instruction, in coordination with the wing weapons manager and operations squadron weapons functions, to establish procedures for control and accountability of NIE and AME.

4.8.6.6. LME includes all tools and equipment that measure, test, or verify system, subsystem, component, or item integrity. HQ AETC/LGMW is the approving authority for all LME in this category and, if applicable, will submit new LME to HQ AETC/SEW and the Nonnuclear Munitions Safety Board for evaluation. The flight chief will submit a memorandum through the squadron maintenance officer or superintendent, QA office, and wing safety with the following minimum information: a description of the test equipment and what it is used for; a list of materials; a wiring diagram and views of the completely assembled unit with wiring visible (if applicable); and the approximate cost (including labor and material). Units will consult the MMHE Book or the MMHE web site (<https://wmnet.eglin.af.mil/mmhe>) before developing unit-unique equipment. Items listed in the MMHE Book or on the MMHE web site are considered preapproved and require no periodic review if instructions and diagrams are followed exactly.

4.8.6.6.2. The QA office and wing safety office will review approved items in all categories biennially. HQ AETC/LGMW must approve any changes or modifications to approved items.

4.9.7. Where economical, 2LM assets must be screened to ensure only unserviceable assets are shipped for repair or tested to ensure serviceability after depot or authorized intermediate maintenance. In such cases, uninstalled avionics line replaceable unit (LRU) testing capability will be retained to the extent necessary.

4.10.3. This section also performs maintenance on trainers.

4.10.3.9. Refer to AETCI 21-106, *Corrosion Control*, for specific wash rack procedures and requirements.

4.10.3.13. (Added) Notifies HQ AETC/LGMTS of new metal-working equipment that may increase productivity.

4.10.3.14. (Added) Ensures only metal-working technicians certified in the use of the jo-bolt fastener removal kit actually remove jo-bolt fasteners from the T-38 lower wing skin. **NOTE:** This kit is the only authorized means of removing jo-bolt fasteners from the lower wing skin.

4.10.3.15. (Added) Reports structural cracks that exceed limits specified in applicable equipment TOs that cannot be repaired or replaced to the appropriate air logistics center (ALC) for disposition according to TO 00-25-107, *Maintenance Assistance*. Sends an information copy to HQ AETC/LGM. Also sends a copy of the memorandum and any other pertinent information to the documentation function for updating AFTO Form 95. Describes the defect and action taken in sufficient detail to permit documentation personnel to extract significant historical data.

4.10.4.1. Refer to TO 00-25-252/AETC Sup 1, *Certification of USAF Aircraft and Missile Welders*, for proficiency requirements.

4.10.5.2. Ensure the seatbelt tester (NSN 4920-612-9755) is used to inspect towropes used in parasail training. Ensure locks, yokes, and frayed areas are tested every 250 feet. Emphasize the middle section of the towrope during testing.

4.10.5.8. Ensure parachutes are inspected after each repack. Accomplish the final inspection of the M11,000 parachute releases as follows:

4.10.5.8.1. (Added) Ensure the arming knob cable sear pin and body assembly is properly installed.

4.10.5.8.2. (Added) Install an AFTO Form 255, **Notice Certification Void When Seal is Broken**, around the release assembly to cover portions of both aft and main body.

4.10.5.8.3. (Added) Document the inspection by placing initials in the upper-right corner of AFTO Form 255 and the Julian date of the completed inspection in the upper-left corner. The repack frequency for these parachutes is 180 days according to TO 14D3-11-1, *Operations, Inspection, Maintenance, and Packaging Instructions for Emergency Personnel Recovery Parachutes (Chest, Back, Seat Style, and Torso Harness) with Illustrated Parts Breakdown—(ATOS)*.

4.10.5.13. (Added) Performs PE and maintenance of canopies and harnesses used for parasail training (TO 14D1-2-411, *Inspection and Repair—Trainer, Ascending—[Parasail, Pioneer PN P-500 and P-500-1]*).

4.10.6.4. Ensure questionable indications of defects are confirmed, using another nondestructive inspection (NDI) method. For indications that cannot be confirmed beyond doubt by using an alternate NDI procedure, contact HQ AETC/LGMTS.

4.10.6.6. Ensure a system to monitor personal exposure to radiation is established and maintained.

4.10.6.7.1. AETC Form 453, **Nondestructive Inspection History**, may be used for this purpose.

4.10.6.9. (Added) Ensures NDI large exposure rooms are not used to perform unscheduled maintenance actions not in direct support of NDIs. The MXG commander may waive this requirement on a case-by-case basis if the radiation safety requirements specified in TO 33B-1-1, *Nondestructive Inspection Methods*, are met.

4.10.6.10. (Added) (*Randolph AFB only*) Assumes responsibility for research and development as directed by HQ AETC/LGM.

4.10.7. Also refer to TO 33-1-37-1, *Joint Oil Analysis Program Manual*, Volume 1, and the following guidance:

4.10.7.1. (Added) Inform and provide recommendations to the propulsion function, tenants, and supported units when findings show an unusual trend. (The propulsion function section will determine corrective action.) The NDI function will immediately inform the MOC, who, in turn, will notify the owning

section and the production superintendent of requests for grounding red cap samples. Following analysis of the requested red cap sample, NDI will immediately notify the MOC who will, in turn, notify the above functions and the propulsion OAP monitor of the findings. The NDI will provide recommendations based on the analysis. Notify the engine management function when an engine has been put on and/or removed from restricted flight.

4.10.7.2. (Added) Inform the owning section upon receipt of any invalid oil samples. Identify the specific discrepancy to the submitting activity and request an immediate response. Establish local procedures to ensure all other OAP data errors are corrected in a timely manner.

4.10.7.3. (Added) Use AETC Form 55, **Oil Analysis Program (OAP) Data Listing**, to validate oil analysis maintenance action recommendations (for example, code T recommendations).

4.10.7.4. (Added) Send a copy of AETC Form 55 to the appropriate work center function and file another copy in the NDI laboratory.

4.10.7.5. (Added) Participate in a monthly review of the Joint Oil Analysis Program-Technical Support Center (JOAP-TSC) data products and base OAP records with personnel in the deficiency analysis and propulsion functions to assess the effectiveness of the local OAP.

4.10.7.6. (Added) Perform a supervisory review daily. Supervisory review requires a printout to be generated and supervisor's initials of acceptance of review of the daily burn listing every day that samples are processed. Keep this listing on file for 90 days. Also, perform an oil analysis database backup procedure daily after the supervisory review is accomplished.

4.10.7.6.1. (Added) Ensure information on jet engines transferred to other AETC bases having the automated oil analysis system is transferred to the floppy disk. Copy the oil analysis history with the engine records. (This includes engines going to dedicated supporting maintenance facilities.) Ensure a hard copy of DD Form 2027, **Oil Analysis Record**, is produced prior to the transfer of the data to floppy disk. Maintain the hard copy until the gaining laboratory acknowledges receipt. The gaining laboratory supervisor will notify the losing laboratory supervisor on receipt of the engine oil analysis history.

4.10.7.6.2. (Added) Establish and transmit an automated product to OC-ALC at least weekly to prevent extensive computer use. Ensure the automated information is not duplicated and processing dates for oil samples are included in the transmission.

4.10.7.6.3. (Added) AETC JOAP laboratory personnel are responsible for ensuring that all processed oil analysis results are transferred to JOAP-TSC, Pensacola NAS FL, according to TO 33-1-37-2, paragraph 3-5. This is a minimum monthly requirement.

4.10.7.6.4. (Added) Notify HQ AETC/LGMTS in case of OAP work stoppage or equipment failure by the next duty day after discovery of the condition. Advise HQ AETC/LGMTS whether the backup support plan must be implemented. After exhausting local maintenance capabilities, AETC laboratories will contact the spectrometer manufacturer for additional telephonic troubleshooting assistance. If the problem still cannot be resolved, laboratories must contact the Program Management Office, OC-ALC TIEO, 4750 Staff Dr, Tinker AFB OK 73145-3317, for contractor onsite support according to TO 33-1-37-2, paragraph 3-11. Inform HQ AETC/LGMTS when support is requested.

4.10.7.6.5. (Added) As applicable, provide the automated OAP file to engine management daily for input into the Engine Trending and Diagnostics (ET&D) Program.

4.11.1. The aero repair function and wheel and tire function may be combined at the discretion of the maintenance squadron commander. HQ USAF/XPMO waiver, 20 April 1998, authorized 58 MXG to align the aero repair function and wheel and tire function under the accessories flight.

4.11.3.2.1. In addition to AFTO Form 781A and MIS entries, AETC Form 403, **Landing Gear/Flight Control Malfunction History**, may be used.

4.11.3.4. Establish a crash recovery and reclamation that includes the following:

4.11.3.4.1. (Added) Coordinate with the fire department, safety, base medical personnel, disaster preparedness, operations, air traffic control, programs function, and QA to develop base procedures and plans for crash recovery of assigned and transient aircraft. At Kirtland AFB, the 377 ABW (AFMC) is responsible for transient aircraft crash recovery as the host wing. Therefore, the 58 SOW/XP will coordinate with the fire department, base medical personnel, disaster preparedness, and air traffic control, to develop base procedures and plans for crash recovery of assigned and transient aircraft. Aero repair will coordinate with safety, programs function and QA to develop wing procedures and plans for crash recovery of assigned aircraft.

4.11.3.4.2. (Added) Provide adequate training for personnel assigned crash recovery duty.

4.11.3.4.3. (Added) Conduct a crash recovery exercise for each assigned mission design series (MDS) (see paragraph **10.2.12. (Added)** of this supplement), consisting of lifting device positioning, sling hookup, and mock hoisting or lifting of the aircraft, including all -2 and -3 TO preparatory actions. Accomplish hoisting or lifting according to the applicable aircraft TO. Do not accomplish hoisting or lifting exercises when surface winds exceed 15 knots. Ensure representatives from ground safety are present as observers during these exercises. Use tethering lines during all hoisting operations. When using a hoist and sling, lift the aircraft the minimum distance required to ensure proper sling positioning (fore and aft). Do not lift the wheels off the ground. Record all crash recovery training as prescribed by AETCI 21-103.

4.11.3.4.4. (Added) Carry out custodial and storage responsibilities for special purpose equipment specifically assigned to the crash recovery mission. Ensure crash recovery equipment is adequately inspected and maintained.

4.11.3.4.5. (Added) Ensure requirements for special purpose and crash recovery vehicles are identified and training and certification on the vehicles is accomplished, as required.

4.11.3.4.6. (Added) Supervise recovery actions as directed by applicable functional supervisors.

4.11.3.4.7. (Added) Ensure reclamation and disposition responsibilities are accomplished as directed in applicable TOs.

4.11.4.1. Due to the volume of wheel assembly inspection requirements, it is not necessary to load and track inspection frequencies in the MIS if inspection dates are recorded on the wheel assembly.

4.11.5.6. Verify completion of post-dock inspection requirements. Pull (complete) forms and transcribe open discrepancies to appropriate AFTO 781-series forms. Prepare aircraft for functional check flight (FCF) when required.

4.11.5.11. To minimize delays in inspection dock flow, components usually replaced (other than items located on bench stock) may be forecasted. The following procedures apply:

4.11.5.11.1. (Added) Compile a list of components for each type of PE (major or minor), phase (PH), or isochronal (ISO) inspection on each type aircraft.

4.11.5.11.2. (Added) Using urgency justification code (UJC) AZ, order necessary items up to 90 days before the aircraft's projected PE, PH, or ISO due date.

4.11.5.11.3. (Added) Dedicate parts received to the aircraft and store and control them within the inspection function. Maintenance managers may, however, use the parts to satisfy impending mission capability (MICAP) conditions.

4.11.5.11.4. (Added) Process items removed and replaced through the repair cycle, using normal due-in-from-maintenance (DIFM) and turn-in procedures.

4.11.5.12. Include AF Form 2410, **Inspection/TCTO Planning Checklist**, and the transaction identification code (TRIC) QMS listing or AETC Form 246, **Inspection Workcard Control**.

4.11.7. Units with en route or transient aircraft maintenance requirements will develop local procedures for debriefing cross-country aircraft.

4.11.7.9. When a transient aircraft experiences a mission-limiting condition, the MOC will notify the owning unit to jointly establish mission need and negotiate repair priority. If the capability exists (possessing like aircraft), the unit will provide the necessary support (to include nonduty hours and weekends) to return the aircraft to mission-capable status based on mission need. The unit possessing the aircraft will report the aircraft status (AFI 21-103). Units receiving transient aircraft will develop procedures to ensure mission-limiting status information is provided to the possessing unit.

4.13.1. Engine maintenance on T-1, T-6, and T-43 aircraft is limited to on-equipment maintenance; off-equipment maintenance is provided by contract logistics support (CLS). Where economical, screen 2LM assets to ensure only unserviceable assets are shipped for repair.

4.13.2.17. Ensure that premaintenance test-cell runs are not subject to rejection criteria.

4.13.2.22. Develop a 6-month engine removal plan with the engine management (EM) section, using the EM forecast as a baseline to manage the engine maintenance workload. Develop this plan, using automated computer products and include, as a minimum, scheduled engine removals for TCIs, PE inspections, TCTOs, and historical data to project unscheduled removals.

4.13.2.24. (Added) Manages control and maintenance of engine airlift trailers, maintenance and storage stands, and mounting adapters, to include direct manufacturing and maintenance of parts carts and equipment to store engine components and hardware.

4.13.2.25. (Added) Determines whether to perform a complete PE or HPO instead of minor repairs on an engine removed for unscheduled maintenance. The engine manager will recommend a course of action to the propulsion flight chief, who will make the final decision. Factors to consider include the availability of additional parts required to complete the reconditioning, PE, or HPO of an engine; number of additional days required to repair the engine; present and forecasted availability of serviceable engines in required configurations; work hours required to complete major maintenance versus limited repair; TCTO kit availability; time changes; and special inspections required.

4.13.2.26. (Added) Ensures inspection, repair, corrosion control, and documentation of demountable noise suppresser systems when installed on power check pads and test stands.

4.13.3.1.2. Assign a propulsion representative to participate in a monthly review of OC-ALC OAP data products and local OAP records to assess the effectiveness of the local OAP program.

4.13.3.1.8. (Added) Ensures an OAP sample is taken prior to (for J69 engines only) and after completion of test-cell operational checks (for all engines). Forward samples, with completed DD Forms 2026, **Oil Analysis Report**, to the OAP laboratory according to TO 33-1-37-1, Volume 1.

4.13.5. The dock concept is the AETC method of engine maintenance for non-2LM units. This requires each engine to be assigned to a team of technicians to perform engine maintenance. Engine ownership remains with the assigned dock from initial disassembly of the engine through final assembly, including its final inspection and assignment to the spare line.

4.13.5.7. Units with F119-PW-100 engines will use the Integrated Maintenance Information System (IMIS). Establish and maintain engine work folder information not contained in IMIS according to AFI 21-101 and this supplement.

4.13.5.7.5. Units with F119-PW-100 engines will use the IMIS to document in-process inspections (IPI).

4.13.5.10. (Added) As a local option, obtain the 100-percent XB3 parts replacement kit from supply up to 30 days prior to scheduled engine removals. When this option is used, store parts replacement kits in a cabinet with sufficient bins to accommodate replacement kit items. Each cabinet should contain all replacement XB3 items for each engine assigned to the dock.

4.13.6. Maintenance of trim pad facilities and associated equipment may be a test cell function.

4.13.6.5. (Added) Report an engine as a test cell reject to EM when required maintenance is beyond the capability of test cell or equipment tooling personnel. Do not classify and report an engine as a test cell reject if any of the following conditions apply:

4.13.6.5.1. (Added) The engine failed during the premaintenance test cell run (or during the initial test cell run when no premaintenance run was performed).

4.13.6.5.2. (Added) Maintenance was accomplished on the engine, but the engine failed the test cell run because of a problem not previously identified during the premaintenance run or as the cause for removal.

4.13.6.5.3. (Added) An engine was removed from the test cell for repairs that could have been done on the test cell, but was removed solely to expedite the workflow.

4.13.6.5.4. (Added) Also report an engine as a test cell reject to EM if the engine fails the test cell run and a discrepancy was induced or found in the same area in which maintenance was performed.

4.13.8. This section may also maintain gas turbine units used in powered AGE.

4.13.12. QEC controls apply to expendability, recoverability, reparability code (ERRC) or engine tear-down facilities.

4.14.2.21. (Added) Publishes a wing instruction to prescribe test measurement and diagnostic equipment (TMDE) handling, mission essential/emergency calibration, processing, customer procedures, and TCTO procedures. **NOTE:** For contractor maintenance, coordinate the wing instruction with the chief QAE and have it approved by the contracting officer prior to publication.

5.4. **NOTE:** Maintenance training office (MTO) is the most efficient organization (MEO) and contracting office (CO) reference to an MTF.

5.4.2.5. This briefing is not required for MEOs or COs.

5.5.1.7. The ERRC facility at Laughlin AFB does not need to submit the quarterly TCTO and Inventory reports. This requirement is for the user of the engines.

5.5.1.9.10. (Added) Findings of oil samples that restrict engine flight.

5.5.1.12. The ERRC facility at Laughlin AFB may use the E102 and E407 CEMS reports for forecast purposes instead of the E373. The E102 is more appropriate for the ERRC because it presents command-wide data in one product.

5.5.1.20. Contractors appoint an engine manager and alternate to perform the primary duties for the engines assigned to the stock record account numbers (SRAN) under the maintenance contract to ensure base engine manager (BEM) and unit engine manager (UEM) duties outlined in current directives and technical orders are accomplished.

5.5.1.20.13. AETC TF39 engines undergo a workscope evaluation prior to shipment. Place TF39 engines in the air freight area within 24 hours after the engine workscope review team provides their recommendation. Notify HQ AETC/LGMMP if this timeframe cannot be met.

5.5.1.20.14. As applicable, use the Integrated Base Engine Management System (IBEMS) to process inputs from CAMS to CEMS, such as, removals, installs, updates, status changes, etc.

5.5.1.22. (Added) Manage and maintain the ET&D Program to ensure the transfer of data between EM, the flying units, and engine maintenance shops.

5.8.13. The Maintenance Data Systems Analysis (MDSA) section is the office of primary responsibility (OPR) for special data requests. Maintenance functions often have requirements for specific information not available in normal reports. If the requested information is already available in other reports, the analysts assist the user in recognizing, understanding, and correlating the existing data to meet requirements. If the requested information is not in a standard report, a customized inquiry and report may provide the needed information.

5.8.14. Develop a guide that outlines analysis capabilities to give to all newly assigned maintenance managers. At a minimum, the guide should detail how analysis special studies can help solve problems, how maintenance data can be used to improve performance, how analysis can provide help with documentation problems, and what other analysis services are available. Analysis capabilities should also be advertised in maintenance summaries, digests, and other media with wide dissemination capabilities.

5.8.16. Analyze maintenance and flying performance data and provide the cause of any trends to management and scheduling functions. Develop annual and monthly attrition factors for weather, maintenance, supply, operations, and other variables into a total attrition factor (AETCI 21-104, *Aircraft Planning and Scheduling*.)

5.8.17. Analyze the base self-sufficiency and repair capability. Also analyze the base repair program to provide maintenance with the data needed to manage and determine work center repair capabilities.

5.8.19. Prepare the Monthly Logistics Indicator Report (MLIR), RCS: AETC-LGM(M) 7501 (AETCI 21-105).

5.8.20.5.17.1. The database manager (DBM) will prepare a maintenance automated data system (ADS) limited contingency plan for short-term (5 days or less) and long-term (more than 5 days) automation non-support. As a minimum, the plan must address:

5.8.20.5.17.1.1. (Added) Manual backup procedures for MIS as well as restart and recovery priorities and procedures.

5.8.20.5.17.1.2. (Added) The schedule of priorities for systems and subsystems for off-site processing. Only those programs absolutely necessary for mission support will be processed off site unless the base or regional processing center (RPC) gives prior approval.

5.8.20.5.17.1.3. (Added) Procedures for accomplishing off-site processing and return and distribution of output products.

5.8.20.5.17.1.4. (Added) Identification of personnel to proceed to the off-site location to coordinate processing.

5.8.20.5.17.1.5. (Added) Restart and/or recovery priorities and procedures for home-site operations upon regaining base or RPC support.

5.8.20.5.21. Refer MIS-related problems that cannot be locally resolved by DBM personnel to HQ AETC/LGXI. If HQ AETC/LGXI cannot solve the problem, request assistance from system program managers.

5.8.20.5.28. Ensure the timer interrupt switch is turned on or off as required.

5.8.20.6.3. Monitor the MIS for incoming and outgoing reliability and maintainability information system (REMIS) data. Notify the configuration manager and subsystem monitors of any REMIS errors for correction.

5.8.20.8.2. Ensure periodic reports generated by MIS are produced and sent to functions requiring the information. Also, ensure base or RPCs transmit required reports generated by MIS.

5.8.20.8.7. Assist the MTF in developing, scheduling, and conducting formal classroom and on-the-job training (OJT) for MIS users as required.

5.8.20.12. The data integrity team (DIT) will meet at least monthly. **NOTE:** This team is not required in contract or civil service organizations as per paragraph 2.3.1.36, basic publication.

6.1.3. Refer to AFI 21-103/AETC Sup 1, for additional guidance. Input start and stop actions for all applicable operational events. Manage start and stop operational events when the automatic option (MIS transaction identification code [TRIC] operating time update [OTU]) is not used. Monitor aircraft, trainers, and trainer-related equipment and the status of scheduled and unscheduled maintenance requirements.

6.1.8.1. In addition, develop the following checksheets as required: emergency war order (EWO) notification; major accident response (such as an explosive mishap, chemical spill, or fuel spill); aircraft in-flight emergency; unauthorized aircraft movement; hijacking; or sabotage, maintenance area, hangar, or flight line fire; resource protection; threatening phone call or bomb threat; attack response; recovery and decontamination of damaged aircraft; power or communication failure, including MOC evacuation; off-station aircraft recovery; and aircraft impoundment.

6.1.12. Monitor, record, and report flying schedule deviations according to AETCI 21-104.

6.1.13. Monitor hangar queen aircraft and provide hangar queen and deviation data to HQ AETC/LGMMMA according to AETCI 21-105.

6.1.17. Notify the EM section of any codes that restrict or limit engine flight.

6.1.22. (Added) Coordinates with supply and appropriate maintenance functions when pre-positioned assets or parts allocated for specific jobs are required for unscheduled maintenance.

6.1.23. (Added) Informs plans and scheduling (P&S) when a possession code change is required. P&S will then process the change.

6.2. Civil service and contractor personnel must be initially qualified on one of the weapon systems. They are not expected to maintain qualifications or proficiency because they are performing MOC duties—not flight line duties.

6.3. Refer to the *AETC Standards of Installation Excellence* (available at base CE), for additional information.

6.4.2. AETC training organizations should refer to paragraph 2.9.15 of AFI 21-101 for additional guidance.

7.1.1. Only units without a MIS are authorized to use preprinted manual AFTO Forms 781A, 781J, **Aerospace Vehicle-Engine Flight Document**, and AFTO 781K, or AFTO Forms 244, **Industrial/Support Equipment Record**, and 245, **Industrial/Support Equipment Record (Continuation Sheet)**. **NOTE:** The 21 AMXS and the 425 AMXS are exempt from the requirements of a MIS.

7.1.2. Ensure the MIS is consistent with and/or matches the aircraft AFTO 781-series forms.

7.1.5. The MXG commander may use locally developed job flow packages, forms, or lists or SE forms to record recurring maintenance tasks for aircraft and trainer. Job flow packages created in the MIS will provide fully integrated and annotated electronic preprints to these recurring tasks. If used:

7.1.5.1. (Added) Locally developed maintenance packages or job flow packages will be developed in the MIS for recurring maintenance tasks where the requirements of the action are normally constant. Examples of such tasks include, but are not limited to, PE, phase, and ISO inspections; engine removal and reinstallation; aircraft wash and lubrication; aircraft complete strip and paint; and wing removal and reinstallation. These automated job flow packages will be scheduled in the MIS and new AFTO Forms 781A will be printed as needed.

7.1.5.2. (Added) Locally approved forms or lists may be used to record removal of access panels from aircraft or SE undergoing scheduled inspection or extensive recurring maintenance; for example, wing removal and replacement, flight control rigging, TCTO compliance, etc. Locally approved forms or lists will have a date on each page so previous versions can be easily identified and purged.

7.1.5.3. (Added) QA will publish guidance in a wing instruction or MOI to ensure proper use, control, and documentation of locally developed job flow packages, forms, and lists. As a minimum, QA will review all job flow packages before they are used and before PS&D inputs them into the MIS. QA will assign an individual control number to each approved form or list, maintain an inventory of forms and lists used within maintenance, and review and update locally approved job flow packages, forms, and lists at least annually.

7.2.2. Units using partially automated AFTO 781-series forms will accomplish an ADR at least every 30 days. Accomplish an aircraft document review (ADR) before and after a scheduled PE and HPO. **EXCEPTION:** Accomplishing an ADR that coincides with the HPO on the H-1 helicopter and the 125-hour HPO on the T-37 aircraft is not required.

7.2.3.2. Publish the ADR in the weekly maintenance and utilization schedule.

7.2.3.5. The maintenance technician will clear the ADR job control number (JCN) in the AFTO Form 781A and in MIS. PS&D will ensure the next due date is correct before clearing the suspense.

8.2.1.2. AETC Form 229, **Intermediate Repair Enhancement Program Asset Profile**, may be used to document the asset profile.

8.3. Local procedures between maintenance and logistics readiness functions may be established to outline the use of onbase delivery or supply priorities to meet specific mission needs. Supply delivery times are established locally to meet mission needs while enhancing efficiency by consolidating deliveries. Vehicle ops is required to deliver supplies, and as such, local procedures between maintenance and vehicle ops should be established for specific delivery priorities and times. Maintenance and vehicle ops will establish route deliveries for low-priority requests to eliminate unnecessary deliveries.

8.5. Order nonexpendable equipment items (NF) through the MIS. If the MIS is not operational or available, use alternate methods according to established policies reflected in local MOIs or wing instructions. Requisition T-1, T-6, T-43, and C-21 CLS-furnished spares (such as contractor operated and maintained base supply [COMBS]) according to the contract using telephone, in-person requisitioning, and in-person pickup.

8.5.2. The requesting activity will retain AF Forms 2413 and 2005, **Issue/Turn-In Request**, as applicable, for verification and reconciliation with the D04.

8.5.4.5. The UJC determines the type of demand method used. The two types of demand methods used are “fill or kill” and “fill or backorder.”

8.5.4.5.1. (Added) Process all UND As (except UJCs AO, AU, and AR) and UJC BQ as “fill or kill.” A zero-balance condition will result in a killed transaction exception (TEX) code 4. At this point, verification begins.

8.5.4.5.2. (Added) Process UJCs AO, AU, AR, and all UND Bs (except UJC BQ), and all UND Cs as “fill or backorder.” A zero-balance condition normally results in the automatic establishment of a backorder, which is called a dueout.

8.5.4.6. Verification is the process used to determine the actual need for the asset ordered and to verify that the asset is not located on base (prior to off-base requisition action). The type of verification used is dependent on the demand method (AFMAN 23-110, Volume 2, Part 13).

8.5.4.6.1. (Added) “Fill or backorder” demands are considered preverified requests. The requesting maintenance activity will perform verification before placing a demand on supply for a needed asset.

8.5.4.6.2. (Added) Verify “fill or kill” demands when there is a zero-balance condition on a needed asset. When a zero-balance condition is determined by supply, the transaction will be killed and verification will begin. Supply (materiel control or forward asset support training [FAST]) is the OPR for verification.

8.5.4.6.3. (Added) If supply does not have the asset available for issue, materiel control or FAST will forward a killed action notice through CAMS via an I024 management notice with an I023 (other assets management listing). Non-CAMS organizations will be notified by phone and the I023.

8.5.4.6.4. (Added) Supply will verify killed requests satisfied from maintenance resources (bench stock or repair and reinstallation).

8.5.4.6.5. (Added) The verification time limit for UND As and UJC BQ requirements is 4 hours. Asset listings for items that require more than 4 hours for bench check, not repairable this station (NRTS) actions, or condemnation may be established on an individual item basis when coordinated with supply.

8.5.4.6.6. (Added) Tenant units at locations where verification responsibilities are assumed by the host supply function are not required to use AF Form 2414, **Verification Worksheet**.

8.6.1. Establish levels to provide a 30-day usage.

8.6.1.5. Obtain items from an established bench stock. Only items essential to launch and recover aircraft are authorized. Quantities of items on trucks should not exceed a 10-day supply. Expeditors are responsible for replenishing items. Each bin must have a locally devised label that includes the stock number, bench stock line number (document number), and quantity authorized in the truck bin.

8.6.1.7. (Added) Setting up a bench stock is a coordinated effort between maintenance and supply (AFMAN 23-110, Volume 2, Part 2, Chapter 25). The following guidance is provided for all AETC units that maintain bench stock locations:

8.6.1.7.1. (Added) Squadron commanders will determine, in writing, the maximum per unit dollar value threshold for items maintained in assigned bench stock locations. The MXG commander must approve any item that exceeds that dollar threshold. The logistics readiness squadron (LRS) commander will file copies of the squadron commander's memorandum and MXG commander's approval memorandum.

8.6.1.7.2. (Added) Squadron maintenance supervision ensures bench stock quantity levels are reviewed periodically, providing inputs and recommendations to the squadron commander to established levels consistent with current demands so the commander can adjust levels accordingly.

8.6.1.7.3. (Added) For contract organizations, the functional director or commander has squadron commander responsibilities.

8.6.1.8. (Added) Items purchased using the Government Purchase Card (GPC) may be maintained on bench stock with the following provisions:

8.6.1.8.1. (Added) Develops a readily identifiable method to distinguish between items purchased using GPC and items procured through supply; for example, use distinctive colored labels (with GPC in bold letters), bin locations, or a segregated area. Labels will also contain the nomenclature, authorized level, and bin location number.

8.6.1.8.2. (Added) To maintain consistency and prevent out-of-stock conditions, mark or flag bins containing GPC items for repurchase, using the same procedures as supply-procured items.

8.6.1.8.3. (Added) Perform reviews of local purchased items in conjunction with normal bench stock reviews to identify any needed adjustments. Establish local procedures for coordinating additions, deletions, or changes to GPC-purchased items kept on bench stock.

8.6.1.9. (Added) Maintenance functions will perform bench stock maintenance on a daily basis. (Perform weekly and monthly maintenance according to AFMAN 23-110, Volume 2, Part 2, Chapter 25.)

8.6.1.10. (Added) When an empty bin is discovered prior to normal bench stock replenishment: (**NOTE:** These procedures apply to supply-managed items only.)

8.6.1.10.1. (Added) Submit a routine empty bin requirement if there is no immediate need for the asset. Process routine refills through MIS (TRIC BSR), if available. If MIS is not available or nonoperational, submit the request to the bench stock support element (BSSE).

8.6.1.10.2. (Added) Submit a priority (urgent) empty bin requirement if there is an anticipated need for the asset. Process a request for priority refill through MIS (TRIC BSR) by entering Y in the priority fill input field. If MIS is not available or nonoperational, submit the request to the BSSE.

8.6.1.10.3. (Added) Process immediate requirements through MIS for the exact quantity needed against the end item if an immediate need for the asset exists and a dueout was previously established for the bench stock asset. If MIS is not available or nonoperational, submit the request directly to the demand processing element.

8.6.1.11. (Added) Bench stock reviews will occur on a monthly or quarterly basis (as determined by the LRS commander) and, if required, a more comprehensive review will be accomplished semiannually (AFMAN 23-110, Volume 2, Part 2, Chapter 25). The bench stock function will:

8.6.1.11.1. (Added) Perform a bench stock review by using the M04 report (Part 1, recommended bench stock additions; Part 2, changes; and Part 4, deletions). This applies to supply-managed items only.

8.6.1.11.2. (Added) Review recommended bench stock additions, deletions, or changes to determine any adjustments to the bench stock. Establish local procedures for coordinating additions, deletions, or changes (for example, memorandums and phone calls).

8.6.1.11.3. (Added) Perform an annual validation of standard reporting designators (SRD) and minimum reserve authorizations (MRA).

8.6.1.12. (Added) Adjust existing bench stock authorized quantities by establishing a maximum authorized quantity (MAQ) or an MRA that will manually override computed quantities, as follows:

8.6.1.12.1. (Added) When an MAQ is compared to the computed quantity, the authorized bin quantity will be the lesser of the two. For example, if the computed quantity is 50 and the MAQ is 25, then the authorized quantity is 25; if the computed quantity is 15 and the MAQ is 25, then the authorized quantity is 15.

8.6.1.12.2. (Added) When an MRA is compared to the computed quantity, the authorized quantity will be the greater of the two. For example, if the computed quantity is 40 and the MRA is 50, then the authorized quantity is 50; if the computed quantity is 80 and the MRA is 50, then the authorized quantity is 80.

8.6.1.13. (Added) For CLS bench stock, maintenance functions will flag a bin when the bin quantity reaches 50 percent or less and notify the CLS function when an out-of-stock condition exists in the bench stock. Bench stocks operated by CLS functions are excluded from the requirements in paragraphs **8.6.1.7. (Added)** through **8.6.1.12.2. (Added)** unless required by the specific contract.

8.6.2. Items such as safety wire, solder, lubricants, and sealant that are routinely used at a workstation may be kept at the workstation. This does not include hardware such as nuts, bolts, and screws (aircraft or equipment parts). Work center supervisors will identify what items are kept at each workstation.

8.7. According to TO 00-20-3, *Maintenance Processing of Reparable Property and Repair Cycle Asset Control System*, ensure components, assemblies, and subassemblies are managed and repaired at the lowest level of maintenance consistent with mission, capability, and economic feasibility. The overall objective of the AETC Repair Cycle Asset Management System (RCAMS) is to prioritize repair of reparable assets based on actual mission needs, process assets through the repair cycle as quickly as possible, accomplish quality repair actions, and maximize repair capability while maintaining the control of the repair process at the work center level. For bases where an MIS equipment capability does not exist, develop local procedures to manage reparable assets throughout the repair cycle in an MOI.

8.7.3. (Added) **Organization and Responsibilities.** The HQ AETC RCAMS uses the decentralized scheduling method and concepts prescribed in TO 00-20-3. The RCAMS is composed of three separate but interdependent elements: the maintenance repair cycle monitor (RCM), who is the POC for manage-

ment of the repair cycle, as assigned by the MXG function; the maintenance work centers reparable asset managers (RAM); and the supply repair cycle support section (RCSS).

8.7.3.1. (Added) Work center RAMs are the key ingredients in a successful and efficient repair cycle. They have the overall responsibility for management of assets repaired in their shops. A work center that has condemnation or NRTS authority for a reparable asset is considered the asset's prime repair work center. RAMs have authority to control, schedule, prioritize, store, and process reparables in their respective work centers; they must be aware of the status of all reparable assets. Status includes assets in base supply, assets in the repair cycle, consumption history, MICAP requirements, cross cannibalization options, and priority of assets to be repaired. RAMs will:

8.7.3.1.1. (Added) Receive and schedule all reparable assets through their work centers (AFCSM 21-559, Volume 2, *Automatic Test Equipment Reporting Systems (ATERS), Software User Manual*).

8.7.3.1.2. (Added) Control and provide storage for awaiting maintenance (AWM) assets. Work centers will also provide secure storage for awaiting parts (AWP) assets for which they are the prime repair work center.

8.7.3.1.3. (Added) Control cross-cannibalization of reparable asset bits and pieces (TO 00-20-3 and applicable MOIs or wing instructions).

8.7.3.1.4. (Added) Process supply assets requiring buildup, maintenance, functional check, or calibration prior to issue.

8.7.3.1.5. (Added) Perform a daily DIFM and turnaround transaction (TRN) reconciliation. (TRNs can be verified by checking the dueout release [DOR].) Failure to provide correct and timely TRN data to supply will result in reduced base stock levels and incomplete reports from which buy, repair, and distribution decisions are made. AF Form 2521, **Turnaround Transaction Log**, may be used as a manual backup or for reconciliation of TRNs.

8.7.3.1.6. (Added) Use MIS and standard base supply system (SBSS) repair cycle products to establish work center production schedules and priorities, manage the flow of assets through the repair cycle, and ensure status is updated as changes occur.

8.7.3.1.7. (Added) Identify and monitor levels of critical assets where the shop is the prime work center.

8.7.3.1.8. (Added) Ensure assets identified as critical on the repair cycle data listing (D23) are afforded appropriate maintenance repair priority.

8.7.3.1.9. (Added) Ensure reparable asset documentation is complete and assets are properly tagged and secured in their reusable containers, if applicable, before turn-in to the RCSS.

8.7.4. (Added) **RCM Function (Maintenance)**. The RCM function is responsible for monitoring the RCAMS, except reparable assets managed within the PMEL and the ground base training system. In coordination with QA, the RCM will establish an MOI or wing instruction that describes local repair cycle management procedures. In addition, the RCM will:

8.7.4.1. (Added) Monitor the management of DIFM asset processing through the repair cycle and be the focal point for rectifying DIFM problems with RCSS.

8.7.4.2. (Added) Review and analyze MIS and SBSS repair cycle data products.

8.7.4.3. (Added) Monitor asset repair cycle time through RCAMS.

8.7.4.4. (Added) Perform local manufacture responsibilities as outlined in paragraph 8.19, basic publication.

8.7.4.5. (Added) Ensure the procedures for the intermediate repair enhancement program (IREP) are followed.

8.7.4.6. (Added) Collect and submit data for maintenance repair capability as required.

8.7.4.7. (Added) Participate in maintenance planning meetings as necessary.

8.7.4.8. (Added) Ensure the RCAMS supports tenant unit reparable asset requirements according to AFI 25-201, *Support Agreements Procedures*.

8.7.5. (Added) **RCSS Function (Base Supply)**. The RCSS will process all property within the maintenance complex for turn-in to supply. The RCSS is responsible for direct routing of serviceable, NRTS, preservation, and condemned assets. Supply documentation will be accomplished through the remote SBSS terminal.

8.7.6. (Added) **Repair Cycle Asset Processing**. The RCSS function is responsible for repair cycle asset processing according to AFMAN 23-110, Volume 2, Part 2, Chapters 2 and 24. Prior to any asset repair action, the RCSS will place a demand for a serviceable asset on supply unless the action is to be a TRN. Either a DIFM firm, DIFM memo, or TRN will accomplish reparable asset processing through the repair cycle. ERRC-designated XD or XF assets are DIFM assets. ERRC-designated XB assets ordered using activity code C (C deck transactions) are also DIFM assets. DIFM firm issue (ISU) or DOR transactions (except initial issues [demand code I]) require a one-for-one exchange of an asset. A DIFM firm detail transaction occurs when there is an issue transaction or when a memo dueout (DUO) is subsequently firmed up (TEX code M), establishing a valid DUO. Additional guidance is as follows:

8.7.6.1. (Added) Use a DIFM memo (memo DUO) to establish “repair cycle visibility” and create a “mark-for” for AWP assets. Only use DIFM memos when there is a zero-balance condition in base supply for a needed asset and repair action is authorized or attempted. On notification of a zero-balance condition, reload the killed transaction using TEX code 7. (By using TEX code 7, the DIFM asset gains visibility on the D23 repair cycle listing.) Because the asset document number remains valid by using the TEX 7, AWP bits and pieces can be ordered using the DIFM memo document number as the “mark-for.” If the asset is repaired, process a turn-in TEX 2 to ensure the asset is released to the proper end item.

8.7.6.2. (Added) Turn in all assets that cannot be repaired to base supply. Firm up the DIFM memo document number so a valid DUO is created.

8.7.6.3. (Added) Process assets that cannot be repaired due to a zero-balance condition for needed bits and pieces into AWP storage. A firm DUO should be processed for the AWP end item or the bits and pieces as appropriate.

8.7.6.4. (Added) Process a maintenance TRN when a repair cycle item is removed from the end item and is repaired and reinstalled without a demand being placed on supply. The repaired asset is not physically processed through base supply, but the repairing work center must give RCSS the information needed to update supply records. Failure to inform RCSS about TRNs reduces the number of serviceable items the LRS can keep on hand. Repair cycle time for TRNs will begin when repair action is entered into MIS and stop when the repairing work center completes the last repair work center event (WCE).

8.7.6.5. (Added) Document repair action on AFTO Form 350, **Repairable Item Processing Tag** (manual or automated). Include the maintenance action taken (code A, F, G, K, L, or Z) in Part II of the AFTO

Form 350. The maintenance work center responsible for the repaired item will furnish sufficient data to RCSS so complete records may be maintained on the item.

8.7.6.6. (Added) When a serviceable asset is received from base supply, the person receiving the asset will annotate DD Form 1348-1A, **Issue Release/Receipt Document**, as required and retain copy two. The LRS will forward copies three and four to RCSS.

8.7.6.7. (Added) The originating work center will enter the unserviceable asset removal in MIS, send the asset to the appropriate repair shop (TRIC NSR, part removed for in-shop processing), and establish a shop repair matrix (TRIC SMT). The matrix will be used for in-shop scheduling of assets through the repair cycle. A permanent shop matrix for a particular asset may be established for future scheduling of identical work unit code (WUC) assets. The originating work center will ensure a repair priority (**Table 8.1. (Added)**) is entered on AFTO Form 350 before processing to the repair work center. Non-DIFM and selected DIFM assets that have the same part number and require the same inspection and/or repair may be processed with a single AFTO Form 350. Use data in part II of AFTO Form 350 for scheduling and routing purposes. Ensure the AFTO Form 350 accompanies the asset.

Table 8.1. (Added) Maintenance Repair Priority System.

I T E M	A	B
	Repair Priority	Applications
1	(R)02A	Unscheduled maintenance, aircraft on flying schedule (including FCF).
2	(R)02B	Unscheduled maintenance, aircraft capable of flying, not on the flying schedule, and not FCF.
3	(R)02C	SE below critical level.
4	(R)02D	Aircraft wheels, batteries, and life support (parachute, lap belts, etc.).
5	(Y)03A	Aircraft scheduled maintenance (PE, PH, ISO) discrepancies that will adversely affect maintenance flow.
6	(Y)03B	Aircraft scheduled maintenance (PE, PH, ISO).
7	(Y)03C	Jet engine scheduled maintenance (PE).
8	(Y)03D	SE not below critical level.
9	(B)04A	Critical assets (DIFM).
10	(B)04B	Critical assets (non-DIFM).
11	(B)04C	SE not below critical level.
12	(B)04D	Aircraft hard-broken, long-time fixes, Hangar Queen, hold down.
13	(G)05A	Local manufacture (supply replenishment).
14	(G)05B	Excess to base requirements.

8.7.6.8. (Added) Update the status and location of repair cycle assets in MIS within 30 minutes after they physically arrive in the work center. (**NOTE:** TRIC codes RDP and DFM are two different MIS screens

and must be updated as the assets' status changes.) If MIS is not available, ensure DIFM status and location updates are called in to the RCSS within the 30-minute criteria.

8.7.6.9. (Added) If an asset cannot be repaired, the prime work center will take the necessary disposition actions and cancel the remainder of the shop matrix.

8.7.6.10. (Added) After repair action is complete, each work center will update status in MIS and on AFTO Form 350 and then process the tagged asset to the next destination with any other applicable documentation.

8.7.6.11. (Added) On DIFM firm transactions, repair cycle time begins when all assets required for a specific JCN are issued by supply and ends when the asset is turned in to RCSS.

8.7.6.12. (Added) Multiple quantities of assets limited to the same stock number may be block scheduled by a work center under one AFTO Form 350; for example, aircraft batteries and wheel assemblies. Block scheduling is not authorized for assets processed outside the prime repair work center.

8.7.6.13. (Added) A turn-in (TIN) transaction will occur when an unserviceable DIFM asset is repaired or is categorized as NRTS and returned to supply.

8.7.6.14. (Added) Process assets under DIFM memo control (TEX code 7 memo DUO) that are repaired through supply in order to clear the memo DUO document number.

8.7.7. (Added) **Management of Repairable Assets.** Use the following products to manage assets through the repair cycle:

8.7.7.1. (Added) **Repair Cycle Asset Management List (D23).** Use the D23 to track, trace, and monitor DIFM assets. Maintenance and supply use the D23 to ensure DIFM assets are returned to supply, to monitor the asset stock position, and to help maintenance establish the asset repair priority.

8.7.7.2. (Added) **Repair Cycle Efficiency Report (J203).** Use the J203 to measure base repair cycle time for IREP analysis and agile logistics.

8.7.7.3. (Added) **MIS.** This system is an automated management tool that provides positive control to the RCAMS. The use of MIS is required. Locally develop and implement manual backup procedures to gather data for MIS input in the event MIS becomes nonoperational. **NOTE:** Bases that do not have MIS equipment capability will develop local procedures in an MOI to manage repairable assets through the repair cycle, thus ensuring the intent of this chapter is maintained.

8.7.7.4. (Added) **SBSS/MIS Interface.** The maintenance-supply interface subsystem of MIS provides the capability to order parts, time change requirements, and TCTOs, and to maintain maintenance event validation of supply requisitions. TRIC MSM allows MIS to process online maintenance and supply interface programs through a central menu (AFCSM 21-579, Volume 2, *Maintenance-Supply Interface, Software User Manual*).

8.7.8. (Added) **Movement and Storage of Repairable Assets:**

8.7.8.1. (Added) **Movement.** The repairing work center function within maintenance is responsible for moving repairable assets expeditiously through the repair cycle. Each unit will establish a reasonable time for these assets to move between organizations, incorporating the standards into an MOI or other instruction. Personnel will hand-carry critical assets throughout the repair cycle rather than allow them to sit at designated repair functions awaiting movement. Personnel will use padded containers and restraining devices to transport sensitive assets.

8.7.8.2. (Added) **AWM.** Prime work centers will maintain and secure AWM assets and associated hardware within the repair function.

8.7.8.3. (Added) **AWP.** When bits and pieces are ordered, the work center will update the MIS status to show that repair action is on hold for parts. UJCs AR and BR must be used to order bits and pieces for AWP occurrences to ensure transactions are included on the AWP validation listing (D19). After bits and pieces are issued, the work center will update MIS with a new estimated completion date and time. If all bits and pieces are not available, the work center will update the applicable MIS work order. The prime work center will maintain and secure all AWP items and associated bits and pieces from bench stock or partial issues with AFTO Form 350, an AF Form 2005 for each bit and piece ordered, and a DD Form 1348-1A for each bit and piece received. If AF Form 2005 is not used for ordering bits and pieces, the document number of all backordered bits and pieces required must be recorded in MIS.

8.7.8.3.1. (Added) Maintenance and supply must monitor AWP assets closely to ensure positive action is taken to return the assets to a serviceable condition, this may include ordering the next higher assembly, cross-cannibalization, local purchase, supply difficulty letters, followups, substitutions, and pursuing Air Force Repair and Enhancement Program (AFREP) initiatives.

8.7.8.3.2. (Added) Removing serviceable subassemblies or bits and pieces from in-shop reparable to satisfy immediate or anticipated needs or to consolidate AWP requirements is authorized and encouraged to relieve or prevent MICAP-reportable incidents. The prime work center is responsible for updating the appropriate DUOs. TO 00-20-2, *Maintenance Data Documentation*, Section V, provides required procedures for reporting cannibalization actions.

8.7.8.3.3. (Added) Items cannot be declared NRTS 4 (lack of parts) and returned to depot without the approval of the AFMC item manager. (NRTS codes are identified in TO 00-20-3.) Maintenance will request disposition instructions from supply to return an item to the depot as NRTS 4. When the disposition instructions are furnished, the TIN documentation will be prepared as follows:

8.7.8.3.3.1. (Added) The prime work center will enter NRTS 4 in MIS and in block 20 of AFTO Form 350.

8.7.8.3.3.2. (Added) A designated prime work center inspector will sign block 15 of AFTO Form 350.

8.7.8.3.3.3. (Added) Unused bits and pieces will be turned in to supply or returned to bench stock. If the prime work center determines bits and pieces have no base consumption or demand forecasted, these bits and pieces will be installed in, packaged with, or attached to the item for return to supply. The prime work center may request cancellation through supply for bits and pieces not received or needed.

8.9. For aircraft cannibalization, the group commander (or equivalent) will designate personnel by position or name to authorize aircraft-to-aircraft, aircraft-to-engine, and engine-to-aircraft cannibalizations. These personnel are referred to as cannibalization authorities (CA) and are normally production superintendents. For engines, the propulsion function supervisor, in coordination with the BEM, will authorize engine-to-engine cannibalizations. For AGE, the AGE function supervisor will authorize AGE-to-AGE cannibalization. The MXG commander or the maintenance authority (MA) for contract maintenance units must approve cannibalization of CAD or PAD items.

8.9.5. (Added) **Cannibalization.** For a cannibalization to occur, the item to be cannibalized must be removed from the system or end item for the sole purpose of installing it on another system or end item. A component already removed cannot be cannibalized. That is, changing the destination of a component already removed is a transfer or diversion action, *not* a cannibalization.

8.9.5.1. (Added) The item to be cannibalized will be an assembly, subassembly, or part that is removed from one end item for installation on another end item. If an assembly is cannibalized to satisfy a condition caused by lack of bits and pieces (for example, washers, nuts, and bolts), the assembly is counted as a cannibalization and the bits and pieces are considered transfer actions. Bits and pieces removed from an end item (without removing the assembly) for installation on another end item are considered individual cannibalization actions.

8.9.5.2. (Added) Priority mission requirements include cannibalization to meet flying schedule commitments, timely completion of a major inspection (PE, PH, or ISO), or major maintenance actions. Priority mission requirements do not include cannibalization of a component when the unserviceable component can be repaired before the end item's requirement for a serviceable component. An item will not be cannibalized solely to attain a MICAP rate or any other statistical yardstick.

8.9.5.3. (Added) Record all cannibalizations in the MIS. In the event the MIS is not available, use AETC Form 1158, **Cannibalization Control Register**, or a locally approved product, as a backup system. Designate a centralized function to file AETC Forms 1158, monitor the cannibalization program, and complete in-house reconciliations with the D04. Develop specific policies and procedures to ensure control of the cannibalization process. At least weekly, forward copies of all AETC Forms 1158 to the supply MICAP function for reconciliation with the supply system.

8.9.5.4. (Added) When a serially controlled component is considered for cannibalization, the CA will coordinate with PS&D or EM to ensure adequate time remains on the item to justify the cannibalization and to ensure appropriate records are updated. If cannibalization occurs, the performing work center will update MIS and notify PS&D or EM. When the MXG commander approves cannibalization of CAD/PAD items, the CA will follow the procedures for serially controlled components.

8.9.5.5. (Added) The munitions accountable system officer (MASO) must coordinate the cannibalization of munitions items. All documentation is the responsibility of the applicable account custodian.

8.17.1.4. Assign aircraft ID numbers to kits as they are received using AETC Form 523, **Aircraft Scheduled Inspection Forecast**, or a locally approved product provided by PS&D.

8.19. Local manufacture of nonstandard or locally designated special tools or equipment must be thoroughly reviewed. All approved local-manufacture requests must have a manufacture priority assigned by the applicable squadron production superintendent, in coordination with the fabrication function superintendent. If any delay arises in the manufacture of approved items, the RCM will coordinate with supply to resolve any causes for the delay. Parts coded for local manufacture in aerospace equipment (aircraft, support equipment, test stations, etc.) illustrated parts breakdowns are considered preapproved.

8.19.1. The MXG commander will designate local manufacture approving authorities.

8.19.2. Local manufacture by the maintenance work center is a combined effort of the requester, RCSS, RCM, and major fabricating work center. The requester must provide sufficient information with the local-manufacture request to permit review and workload estimation as follows:

8.19.2.1. (Added) Requests for items with a nonrecurring requirement (for example, made-to-fit assets such as hoses, lines, and panels) will be submitted on AFTO Form 350. When possible, the requester will forward a sample with the AFTO Form 350. The equipment account custodian will submit requests for local manufacture of equipment items to the equipment management element of the LRS.

8.19.2.2. (Added) Supply will assign a document number to the local-manufacture request and forward it to the approval authority for approval or disapproval. If approved, the request will then be sent to the

RCM for processing. When a request is disapproved, the RCM will annotate the request with the reason for disapproval and return it to the requesting function through the LRS. (At some locations, the RCM may also be an approval authority.)

8.19.2.3. (Added) When a request is approved, the RCM will:

8.19.2.3.1. (Added) Separate the jobs to be accomplished by contract from those to be accomplished in the maintenance work centers.

8.19.2.3.2. (Added) Send the request for the work to be done by contract to base contracting for processing.

8.19.2.3.3. (Added) Annotate the request with status code BB and the estimated date of completion. If the local-manufacture request is not in work because of a lack of parts, drawings, etc., the RCM will annotate status code BD on the request and then send the request to the RCSS.

8.19.2.4. (Added) The RCSS will make a list of material requirements and ensure the necessary blueprints and specifications are available. After completion of work planning, the RCM will authenticate the work orders as follows: maintenance repair priority; original requester's name, shop, and phone number, if known; estimated date of completion; signature of the RCM and date the job is scheduled to begin; and signature and date of the maintenance approval authority.

8.19.2.5. (Added) On receipt of all required material and any required samples, the RCSS (or equivalent) will forward the local-manufacture work order to the applicable fabricating work center and any required drawings and/or samples needed for manufacture. The RCSS will validate the currency of technical drawings, aperture cards, and microfilm before forwarding the work order to the fabricating work center.

8.19.2.6. (Added) The fabricating work center will enter an AFTO Form 350 number into MIS by entering local (LCL) in the DIFM, TRN designator block.

8.19.2.7. (Added) The validation date will be documented on the drawings or a separate paper attachment to the drawing. The validation date should not exceed 6 months before the beginning of manufacture. The RCM, in coordination with squadron production superintendents, RCSS, and repair work centers will develop local procedures for emergency local manufacture of repair priority 02 ([Table 8.1. \(Added\)](#)).

8.19.2.8. (Added) On completion of a local-manufacture work order, the major fabricating activity RAM will close out the work order by entering the date completed and signing the work order. The activity will:

8.19.2.8.1. (Added) Send the workorder to the RCSS with the item and any drawings or samples. The work order must state the organization and shop code of the major fabricating activity. Enter code Y, the organization and shop code, and the total cost of direct labor, materiel (provided by supply when necessary), and the overhead used to manufacture a single unit (if the requester is under the maintenance industrial fund concept). If the requester is under the operations and maintenance (O&M) concept, enter only the total cost of materiel used.

8.19.2.8.2. (Added) Close the work order in MIS. The manufactured item may be sent directly to the requester or to RCSS if a current demand for the item does not exist; for example, bulk-produced flight control cables.

8.19.2.9. (Added) The production superintendent, fabrication superintendent, or designated approval authority may authorize specific exceptions to local manufacture requests and work order processing procedures to fulfill one-time urgent requirements for field management or nonfield management-coded expendable items. The local manufacture will be accomplished after approval, but the documentation may

be processed after the fact to the supply activity. If this occurs, the supply activity will be given the appropriate requisition forms with the additional information normally furnished when routine local manufacture work orders are processed.

10.2.12. (Added) Serve as evaluators during aircraft crash recovery exercises. Develop checksheets listing the sequence of critical actions, TO use, and training documentation. As a minimum, exercises should evaluate aircraft lifting procedures and -2 and -3 TO preparatory actions. These exercises will be performed annually for each type of aircraft possessed (two MDS for the 97 AMW) and will be planned and coordinated through the wing plans office. (**NOTE:** An actual recovery of an aircraft performed by a unit that meets all aspects of a recovery and was evaluated by QA meets the annual requirement.) Crash recovery exercises are not performed on C-17, C-21, and T-43 aircraft. CLS will provide T-43 crash recovery support when needed.

10.6.21. (Added) Controls T-38 flight control decals and administers the Challenge and Response Program according to T-38 series TOs.

10.7.7. The master AFTO Form 781 binder may be in the form of an MOI rather than maintaining a master binder for each MDS.

10.9.1.3.7. The MXG commander will identify tasks to include on the key task list (KTL).

10.9.1.3.8. The MXG commander will identify additional routine inspection list (RIL) actions as necessary.

10.9.9.4. When gaining an aircraft or equipment from another unit, AETC units should contact the losing organization to try to set up a combined acceptance and transfer inspection at the losing organization's location. When the acceptance inspection is complete, discrepancies discovered at the gaining AETC unit's location are the responsibility of the gaining unit. The owning flight or section is responsible for acceptance inspections. Detected discrepancies attributable to depot maintenance (organic or contracted) will be processed as prescribed in 00-20 series TOs and TO 00-35D-54, *USAF Deficiency Reporting and Investigating System*.

10.15.2.1.10. (Added) Develops an MOI or wing instruction that outlines specific product improvement program (PIP) wing or unit responsibilities and procedures.

10.15.2.1.11. (Added) Ensures that standardized PIP training is provided to all newly assigned personnel.

10.15.2.1.12. (Added) Tracks innovative development through employee awareness (IDEA) program submittals (AFI 38-401, *The Air Force Innovative Development Through Employee Awareness [IDEA] Program*).

10.15.2.4.3. (Added) Maintains a product improvement working group (PIWG) file, if applicable, to include a locally devised logbook, ledger, or computer program to record agenda items, meeting minutes, PIWG agenda input reports, and MAJCOM correspondence. The product improvement manager (PIM) will:

10.15.2.4.3.1. (Added) Develop a PIWG input report for each system (such as AGE, PMEL, avionics, engines, and commodities) and the primary weapon system that has an established PIWG.

10.15.2.4.3.2. (Added) Conduct unit-level PIWG meetings with supervisors and technicians when these meetings are determined to be beneficial to ensuring quality inputs to PIWGs or when ideas are solicited to enhance product improvement. (The PIM will chair these meetings, prepare an agenda, keep meeting

minutes, and forward a copy of the minutes to the appropriate unit agencies and HQ AETC/LGM within 30 days of the meeting.)

10.15.2.4.3.3. (Added) Forward selected agenda items to HQ AETC/LGM on request.

10.15.2.4.3.4. (Added) List items that require out-of-cycle input to HQ AETC/LGM. Submitted agenda items must include item nomenclature, WUC, part number, NSN, defect or improvement statement, reason for submission (including number of failures, man-hours consumed, and estimated costs to repair or the cost, if left uncorrected), and recommended actions.

10.16.5. Ensure all locally developed workcards and checksheets are reviewed and validated by QA and approved by the MXG commander or functional director (or commander and QAE). When TOs have not been published for equipment assigned to the maintenance complex, QA or the maintenance function where maintenance is actually done may set up a file of commercial publications relating to this equipment (AFPD 21-3, *Technical Orders*, and TO 00-5-2, *Tech Order Distribution System*). This file must be collocated with the TO file.

10.17. One-time inspections (OTI) may be repeated until the malfunction is resolved.

10.17.1. For G081 units, the MIS automatically creates the first two characters of the data code.

10.19.1. The operations group (OG) commander, in coordination with the MXG commander or MA, will establish and implement local FCF procedures.

10.19.3.3. In addition, collect and prepare FCF results according to AETCI 21-105.

10.19.3.4.4. QA may suspend the debrief of FCFs on helicopters requiring multiple sorties until the successful completion of the FCF or operational check flight (OCF), at termination of all required FCF or OCF attempts for that aircraft for that flying day, or upon crew change.

10.19.3.5.3. Fly FCFs for a single-engine change on a two-engine aircraft if that aircraft will next fly an extended overwater flight (for example, oversea deployment). **NOTE:** This applies to engines with no operating time since major maintenance. It does not apply to engines obtained from a donor aircraft with an established operating time.

10.19.7. An example of an FCF conditional release is one where the FCF is for engine low power and all engine systems check out with the exception of an engine oil pressure fluctuation. Maintenance troubleshoots this fluctuation and determines the cause as a defective oil pressure transmitter or gage.

10.19.7.1. (Added) When rotary-wing aircraft encounter certain FCF requirements, such as blade balancing, that require multiple sorties to accomplish a single FCF, these sorties can be considered as one attempt provided the need for multiple sorties to accomplish the FCF was identified in either the unit's FCF MOI, the aircraft's -6 TO, or specified during the FCF briefing. The following exceptions apply:

10.19.7.1.1. (Added) A multiple-sortie FCF attempt that changes its aircrew (all crewmembers) is terminated and coded as a "nonrelease." A new aircrew will be debriefed and a new attempt initiated.

10.19.7.1.2. (Added) A multiple-sortie FCF attempt that does not release by the end of the flying day is terminated and coded as a "nonrelease." A new attempt will be initiated the next day.

10.19.9. If necessary, units will develop guidance for FCF procedures away from home station using guidance provided in AFI 21-101 and this supplement.

10.23.1.6. Units will establish local methods for documenting T-1A configurations and T-1A Form F filing locations and to provide operations group schedulers with current aircraft configuration status.

10.23.1.9. Supplemental handbook storage for T-1, T-6, and T-43 aircraft is as follows:

10.23.1.9.1. (Added) On the aircraft for T-1 and T-43 aircraft.

10.23.1.9.2. (Added) At the operations desk for T-6 aircraft.

10.26. (Added) **Value Engineering Program.** (*Contract Operations only*) This program is an incentive plan that encourages civilian maintenance contractors to develop and engineer new and innovative ways to save money. By submitting cost-reduction methods to the government under the value engineering program, contractors can help the government cut costs and, at the same time, share in the savings. Submission criteria and procedures for value engineering change proposals are addressed in AFI 63-801, *Value Engineering Program*, and maintenance contracts.

13.1. The tool management program encompasses all facets of tool accountability, control, and storage procedures for common and special tools. It also encompasses support and test equipment. Units should employ good judgment and common sense to ensure the intent of the program is met for those areas or situations not specifically covered by this supplement. (**NOTE:** C-21 maintenance contractors will follow the tool management program established by their contract.)

13.2.1.13.4. The unit environmental coordinator will coordinate submission and track closure of applicable environmental impact analysis process (EIAP) requests.

13.2.1.14. (Added) Procedures for identifying planned maintenance activities that will be brought onto an installation (such as depot field team [DFT] and contract field team [CFT] maintenance). The unit coordinating or requesting the DFT will submit an AF Form 813, **Request for Environmental Impact Analysis**, to request evaluation of the environmental impact and identification of the applicable compliance requirements for the planned maintenance activities. The unit environmental coordinator will coordinate submission and track closure of the EIAP request.

13.2.1.15. (Added) Procedures for shop supervisors to identify changes in materials, process, or equipment that require submission of AF Form 813 for EIAP assessment. The unit environmental coordinator will coordinate submission and track closure of the EIAP request.

13.2.1.16. (Added) Procedures for local accountability, control, and use of electronic tools (E-Tools) (laptops, slates, etc.). As a minimum, representatives from unit communications, technical order distribution office/joint computer-aided requisition and logistics support, small computers, and maintenance should coordinate on the operating instruction.

13.2.1.16.1. (Added) E-Tools purchased and used to view digital technical data and maintenance documentation will be accounted for as automated data processing equipment (ADPE) according to AFI 33-112, *Computer Systems Management*.

13.2.1.16.2. (Added) Licenses, certification, maintenance, and security of the E-Tools hardware and software will also be according to AFI 33-112.

13.2.1.16.3. (Added) E-Tools purchased by the MAJCOM to view digitized data and maintenance documentation will only be used for its intended purpose. Only MAJCOM-authorized software will be loaded on E-Tools.

13.2.1.16.4. (Added) An ADPE account specifically identifying and designated for E-Tools will be set up within each support section containing E-Tools to account for E-Tools separately from other small computers within the squadron or support section.

13.2.1.16.5. (Added) The wing functional administrator (FA) designated in TO 00-5-1, *AF Technical Order System*, and TO 00-5-2, will be responsible for overall distribution and management of E-Tools.

13.2.1.16.6. (Added) The wing FA will be the MAJCOM's POC for coordinating delivery and receipt of E-Tools.

13.2.1.16.7. (Added) The wing FA will be the focal point between E-Tool users, the support sections, and base small computers and system administrators.

13.2.1.16.8. (Added) The wing FA will maintain a master listing of all E-Tool ADPE accounts and inventory of all E-Tools. The FA will ensure E-Tools are configured with current software to support TO and maintenance documentation.

13.2.1.16.9. (Added) E-Tools will be controlled and issued from the applicable support section using the same procedures used for other support equipment.

13.3.4.9. Shelves, drawers, cabinets, etc., used to store individual issue tools, special tools, and equipment or other items available for issue must have item locations marked and identified (label, shadow, silhouette, etc.). Marking these locations will facilitate end-of-shift visual inventory of the tool storage facility.

13.3.4.15. (Added) Do not use electric motor-driven tools (including drills, sanders, and screwdrivers) on or in the immediate vicinity of aircraft. Nonmotor-driven electric tools, such as soldering irons, are authorized for use on aircraft. The following exemptions apply:

13.3.4.15.1. (Added) Underwriters laboratory (UL)-approved vacuum cleaners may be used in and around aircraft if they are maintained and controlled as composite tool kit (CTK) equipment items and are not used in areas prone to flammable or gaseous mixtures.

13.3.4.15.2. (Added) Battery-powered screwdrivers and drills may be used to remove and replace fasteners that attach panels to aircraft structures with the following restrictions:

13.3.4.15.2.1. (Added) Do not use these tools used to install fasteners that require a torque value unless the tool is equipped with an approved torque-sensing device calibrated by PMEL.

13.3.4.15.2.2. (Added) Do not use these tools in class 1, division 1, hazardous areas; to install or remove fasteners from fuel tanks, fuel cell cavities, or nacelles; within a 1-foot radius of fuel vents that extend upward from the floor to a level of 5 feet above the fuel vent; within 18 inches of the floor; or when there is a known or suspected fuel leak or spill. Tool battery exchanges and recharges will not be conducted in class 1, division 1 or 2, hazardous areas.

13.3.4.15.3. (Added) Air-powered tools may be used on aircraft; however, do not use air-powered drills with apexes for aircraft panel installations unless they are equipped with a torque-sensing device calibrated by PMEL.

13.3.4.16. (Added) Process misused, lost, damaged, or destroyed tools according to AFMAN 23-110, Volume 2.

13.5.1. Use of the Tool Accountability System (TAS) is optional for all AETC contract and civil service aircraft and trainer maintenance organizations; however, if they elect to use an automated system it will be TAS and they will adhere to the guidance in AFI 21-101 and this supplement. **NOTE:** Contractors using an automated system that was accepted by AETC prior to the 1 October 2002 version of AFI 21-101 may continue to use that system until the contract is recompeted or the contractor voluntarily elects to use TAS

at no additional expense to the government. AETC Form 1042, **CTK Tool Checklist**, or locally approved form, or another system for accountability and control of tools and equipment may be used.

13.5.3. (Added) In small work centers, it may be impractical to designate a full-time CTK custodian. Work centers fitting this criteria usually have a small quantity of personnel assigned and may share the same CTK to perform their maintenance tasks. There may also be work centers where the only tool management functions being performed are issuing, inventorying, and securing CTKs and equipment. In work centers such as these, the work center supervisor may designate (in writing) a member of the maintenance team to be a CTK monitor. The CTK monitor will ensure CTKs, tools, and equipment are properly controlled, inventoried, and secured.

13.5.4. (Added) If tools are issued for use in a pouch, lineman's kit, or a similar kit or container that prohibits silhouetting and/or shadowing, use AETC Form 1042 or a locally approved form or product to facilitate inventory control. Include the CTK number of the pouch or kit and the quantity, nomenclature, and CTK number (if different) of each tool included in the kit. The form will be completed at the time of issuance and remain in the CTK storage facility. When the tools are returned, the form will be used to inventory and reconcile. These procedures do not take the place of the requirement for inventories to be completed by the user at the completion of each task. **NOTE:** Units may elect to mark (with permanent marker, stamps, etc.) the exterior of a pouch with an inventory of the items contained in order to facilitate user inventories at the end of each task.

13.5.5. (Added) Use AETC Form 1042 or a locally approved form or product to identify tools or other items removed from a CTK, including the CTK number, nomenclature of the item, date removed, the reason removed, and initials (or employee number) of the individual making the entry. Units may use one form or product to record all items removed from all CTKs assigned to the tool storage facility or use a separate form for each CTK. Regardless of the method used, the form or product will be maintained in the tool storage facility to ensure a record of tools removed from CTKs.

13.6. Unserviceable parts used for testing or as tools must be marked as unserviceable. Contract organizations will provide an informational copy of all approved items to the QAE office.

13.8.1.5. AETC Form 138, **Lost Tool/Chit Investigation Record**, may be used to report the lost tool. The report will then be routed through maintenance supervision to QA for filing.

13.9. (Added) **Uses for AETC Form 1042.** AETC Form 1042 is a multipurpose form designed to facilitate a number of tool and equipment management functions. Some examples of how this form may be used are as follows:

13.9.1. (Added) The front side of AETC Form 1042 may be used to provide a record of tools removed from a CTK. In this case, fill in the CTK number of the kit to which the tools are assigned, nomenclature, quantity removed, date removed, reason removed, and initials (or employee number) of individual removing the tool. When a tool is replaced, annotate the date replaced.

13.9.2. (Added) The front side of AETC Form 1042 may also be used to facilitate inventory control of tools issued for use in a pouch, lineman's kit, or a similar kit that prevents silhouetting and/or shadowing. When the form is used for this purpose, identify the CTK number of the pouch or similar container in the upper left-hand corner, the quantity placed in the kit, and the CTK number (if different) of the tool being placed in the kit. The kit may then be issued out and returned, using the reverse side of the form.

13.9.3. (Added) The reverse side of AETC Form 1042 may be used to issue CTKs, tools, or equipment. When used for this purpose, the form is self-explanatory.

15.2.1.2. The senior scheduler will visit decentralized scheduling activities and centralized scheduling sections to review procedures and ensure published guidance is being followed.

15.2.1.5. Establish a master training plan for scheduling and documentation personnel. Refer to AFI 36-2201 and AETCI 21-103 to establish minimum requirements.

15.2.1.7. (Added) Participate in all wing scheduling meetings representing maintenance operations flight (MOF) PS&D responsibilities.

15.2.1.8. (Added) Establish PE, ISO, or PH inspection day requirements in coordination with the inspection supervisor.

15.2.1.9. (Added) Act as the maintenance POC for publishing the sortie configuration code list.

15.2.1.10. (Added) Manage and ensure the accuracy of the aircraft utilization code (AUC) table.

15.2.1.11. (Added) When notified by operations that refueling documents (AF Form 15, **United States Air Force Invoice**) for aircraft refueling at non-Air Force installations are missing, reproduce one copy of the applicable AFTO Form 781H, **Aerospace Vehicle Flight Status and Maintenance**, and forward it to the appropriate operations function.

15.2.1.12. (Added) Be the single POC between operations and maintenance for establishing firm maintenance and operations schedules that support all requirements.

15.2.1.13. (Added) Coordinate with appropriate work centers on scheduled maintenance requirements, perform aircraft document reviews, and attend scheduling meetings.

15.2.3.3. (Added) Annually, the senior scheduler will ensure all historical jacket files located in centralized or decentralized PS&D sections are inspected for completeness. The senior scheduler will:

15.2.3.3.1. (Added) At a minimum, review the aircraft specific -6 TO to ensure that items requiring an AFTO Form 95 (or automated version) have one in the jacket file and that it is complete and accurate.

15.2.3.3.2. (Added) Check the pulled forms (AFTO Form 781 series) for the correct number of reports.

15.2.3.3.3. (Added) Ensure that the egress planning requirement (PRA) on file is current, accurate, and contains a signature from egress.

15.2.3.3.4. (Added) Review TO 00-20-1, *Aerospace Equipment Maintenance General Policies and Procedures*, for a list of required forms and ensure they are on file.

15.2.3.3.5. (Added) Ensure there is a copy of the last records check. At a minimum, there must be a copy of the last major and minor inspection package.

15.2.3.3.6. (Added) Establish local requirements for inspecting any additional records not previously identified maintained in the jacket file.

15.2.3.3.7. (Added) Attach a locally designed form or product on the front of each historical jacket file and record the completion of each annual inspection on the form.

15.2.3.11. (Added) Publishing a local instruction that includes the procedures for assigning event identification designators (EID) in the event the MIS becomes inoperative.

15.2.5. As a minimum, build long-range plans, monthly plans, weekly schedules, and any additional plans designated by the operations squadron, OG, or MXG commanders. Units that choose electronic

means to distribute their schedules must ensure there are sufficient paper copies available for sections that do not have the capability to receive electronic copies.

15.2.5.4. The MXG commander, DOM, or designated representative will chair the meeting, and the MOF PS&D or civilian equivalent will serve as the OPR. Additional areas to be discussed will include, but not be limited to, deviations from the previous day's flying schedule, the next day's flying and maintenance requirements, and the incorporation of unscheduled maintenance. Prior coordination between maintenance and operations schedulers will assist in confirming that all known requirements and changes are available for discussion.

15.2.5.4.1. (Added) The MOF PS&D or civilian equivalent will review the MIS before each daily scheduling meeting to ensure scheduled maintenance actions have been completed and updated as appropriate. This includes verifying new inspection and TCI due times.

15.3.5.3. Document quarterly reviews on a locally designed form or product.

15.3.6.4. PS&D will conduct pre-dock and post-dock meetings and review inspection packages to ensure they are accomplished appropriately. Paragraphs **15.3.6.5. (Added)** through **15.3.6.7. (Added)** provide additional responsibilities of the PS&D.

15.3.6.5. (Added) Prior to the pre-dock meeting, accomplish an aircraft document review. Schedule the pre-dock meeting so that the aircraft AFTO Form 781-series forms can be available for review during the meeting and conduct the meeting before starting the inspection. As a minimum, representatives from PS&D, inspection, flight line functions, egress function (when CAD/PAD TCIs or TCI verifications are scheduled) and supply (if needed to validate part availability) will attend the pre-dock meeting.

15.3.6.6. (Added) List additional maintenance actions scheduled to be accomplished during the inspection on AF Form 2410. List TCTOs and TCIs scheduled in block 16. Supply will validate TCTO and TCI requirements for which backorder parts or kits exist.

15.3.6.7. (Added) After the meeting, schedule all actions listed on AF Form 2410 in the MIS. Give the original AF Form 2410 to the inspection function. Maintain a duplicate AF Form 2410 in suspense to use as an aid when conducting the post-dock meeting.

15.3.7. PS&D will chair the post-dock meeting. Attendance to the meeting will include representation from the same duty sections as the pre-dock meeting and any local requirements. The post-dock will be held as soon as possible after completion of the inspection (including FCF release, if required) and prior to normal flight. Newly printed or transcribed AFTO Form 781-series forms will be used to accomplish the post-dock.

15.3.7.1. (Added) Prior to the post-dock, the inspection function manager will:

15.3.7.1.1. (Added) Ensure all discrepancies discovered during the look phase of the inspection were entered into the MIS according to Chapter 7, basic publication.

15.3.7.1.2. (Added) Review the MIS to ensure corrected discrepancies and inspection card items are properly documented.

15.3.7.1.3. (Added) Ensure scheduled actions listed on AF Form 2410 are properly documented.

15.3.7.1.4. (Added) Change the delivery destination for parts ordered but not received during the inspection.

15.3.7.2. (Added) At the post-dock, PS&D will:

15.3.7.2.1. (Added) Review the work package for completeness and perform a document review (DR). Attendees must be prepared to discuss any significant factors that had an effect on the inspection and could adversely impact future plans, including items on AF Form 2410 not completed.

15.3.7.2.2. (Added) In coordination with EM, review or process all suspenses and verify TCTO status, TCIs, and inspection due dates for accuracy. Errors will be corrected immediately. Historical records will be updated as required.

15.3.7.2.3. (Added) After a complete validation of all records, make the final entries on AF Form 2410 and file the original and all nonautomated products in the aircraft jacket file. Automated products are not required to be maintained in the jacket file as long as all JCNs for the inspection and additional tasks are annotated on AF Form 2410 and the data is retrievable either on line, by the DBM, or from a disk. Maintain an AF Form 2410 of each scheduled inspection for the complete inspection cycle.

15.5. Planning is accomplished to ensure the optimum use of aircraft and equipment and to ensure scheduled and unscheduled maintenance requirements are completed. PS&D develops the unit's maintenance and utilization plans and ensures coordination with operations. AETCI 21-104 prescribes procedures for maintenance and operations in the planning and scheduling of mission requirements.

15.6.1. PS&D will use operational utilization plans, MIS reports, depot and Queen Bee input and output schedules, and aircraft transfer schedules to build maintenance plans and schedules.

15.7. Planning is a four-phase process. The first phase is to develop a long-range plan beginning with the current month and reaching out 2 months into the future. The second phase is to refine the long-range plan into a monthly plan. In the third phase, each weekly portion of the monthly plan is further refined to produce a weekly schedule. The last phase of the planning process is to verify maintenance, training, and operational requirements and finalize the daily portion of the weekly schedule.

15.7.2.2. Refer to AETCI 21-104 for guidance.

15.8.1.1. (Added) A long-range or quarterly plan is the basis for all other phases of the plans and scheduling process. Units will develop this plan on a locally developed product or a roll-chart board so that it is accessible by maintenance and operational personnel at all times.

15.8.1.2. (Added) Units will start the development of a new plan at the end of each month for the beginning of the next. Initial maintenance requirements identified are normally limited to known major actions, such as PE, PH, or ISO inspections; depot or Queen Bee inputs and outputs; aircraft gains and losses; aircraft washes and paints; -6 TO special inspections; TCIs; TCTOs; engine removals and changes; deferred discrepancies requiring extensive maintenance; ground training; and any local requirements.

15.8.1.3. (Added) All data needed to build this plan will not be available at the beginning of its development. However, as requirements become known, they will be added. Periodic adjustments will be made to ensure the most economical use of resources, while ensuring supportability of the operational requirement. A proactive long-range scheduling process will result in the development of an accurate and useful monthly plan.

15.9. Monthly aircraft maintenance and utilization planning is a continuation and refinement of the long-range planning process that includes the addition of aircraft sorties identified on AETC Form 206, **Monthly Flying Contract**. Document all known monthly utilization and maintenance requirements on a locally developed automated product or an Air Force general purpose form.

15.9.5.7. In-shop maintenance requirements will also be published. Completing the AETC Form 520, **Engine Maintenance and Inspection Forecast**, fulfills engine requirements.

15.9.5.21. (Added) Other items directed by the wing commander will be added to the monthly plan. The plan may be published as a monthly plan or as an annex to the last weekly schedule on the preceding month. Once signed by the wing, OG, and MXG commanders, the monthly plan becomes the monthly contract.

15.10. Make adjustments to the monthly plan during the weekly process to compensate for uncompleted maintenance actions, high or low sortie attrition, short-notice maintenance requirements, etc. Operations and maintenance schedulers must coordinate regularly when developing the weekly schedule to ensure all required utilization and maintenance requirements are supportable. Squadron PS&D will produce and deliver a reproducible or electronic copy of their portion of the weekly utilization and maintenance schedule to PS&D by 1200 on Thursday (Friday for Kirtland AFB) of the week preceding the effective week. Use an Air Force general purpose form, locally approved form, or locally developed spreadsheet to build the weekly schedule and provide an overview of the week.

15.10.1.1. Landing times are not required if the unit flies an established and constant average sortie duration (ASD).

15.10.1.12. (Added) Scheduled utilization and maintenance actions by aircraft and equipment serial number, to include sortie line number, PE, PH, ISO, HPO, home station check (HSC), and -6 TO calendar and hourly special inspections.

15.10.1.13. (Added) Estimated requirements for petroleum, oil, and lubricants (POL) when required, to include number of trucks, refueling pits, and times required.

15.10.1.14. (Added) Aircraft and equipment required to support ground-training requirements.

15.10.2. File the original signed copy in PS&D and maintain it according to AFMAN 37-139.

15.10.3.10.3. (Added) Until a requirement is established by the MIS for the flying schedule to be loaded into the MIS, units that possess aircraft designated as trainers (for example, T-37 and T-6) have the option to not load the flying schedule into the MIS. All other units will load flying schedules in the MIS by 1400 on Friday of the week preceding the effective week or prior to the daily scheduling meeting for the next day. Units are highly recommended to load the schedule that makes status and deviation reporting easier, more accurate, and nearer to real time.

15.10.4. (Added) Maintenance scheduling effectiveness (MSE) provides the MXG commander an illustration on how well the organization executes the maintenance requirements printed in the weekly schedule. PS&D will compute MSE by measuring the degree to which scheduled actions in the weekly schedule are accomplished. The last weekly schedule of the month will also include the cumulative rating for the month. MSE will be computed and reported according to AETCI 21-105.

15.12. TCTOs are issued from ALCs. MOF PS&D will manage and schedule TCTOs, MAJCOM modifications, and MAJCOM and local one-time inspections; ensure TCTO configuration management system status accounting reports are updated and returned to the ALC; and coordinate with each squadron PS&D on the distribution of kits or parts based on mission needs.

15.12.1. HQ AETC/LGM is the sole waiving authority for TCTO kits. In coordination with HQ AETC/LGSWA and LGMA, ensure all required assets are available in the supply system prior to submitting a

waiver request to HQ AETC/LGM. Ensure waiver requests meet the requirements established in TO 00-5-15, *Air Force Time Compliance Technical Order Process*.

15.12.1.9. (Added) The applicable PS&D will load TCTO supplements that require additional work, change existing maintenance procedures, or place additional demands on supply. The PS&D will notify the appropriate work center function when a TCTO requires entry into current equipment documents.

15.12.1.10. (Added) The engine manager will schedule noninstalled engine-related TCTOs and coordinate with PS&D on installed engine TCTOs to ensure compliance before remove-from-service dates. The engine manager will use AETC Form 523 (or a similar locally developed product) and annotate TCTO requirements on AF Form 2410 prior to the pre-dock meeting.

15.12.2.2.7. Maintain the last six TCTO reconciliation listings and meeting minutes.

15.12.2.2.8. Send messages to HQ AETC/LGM.

15.12.2.4.9. (Added) Perform a supervisory inspection of initial TCTO compliance on TCTOs determined to need an initial evaluation. Perform initial evaluations based on the complexity of the TCTO as well as the criticality of the system or component modified.

15.12.3. (Added) **Control and Transfer of TCTO Kits.** Transfer of J85 and J69 engines normally includes transfer or exchange of TCTO kits. Engine kit requirements and excesses will be reconciled and inventories periodically adjusted by HQ AETC/LGMTP.

15.13.1.2. AETC units will send a copy of their annual egress explosive CAD/PAD forecast to HQ AETC/LGMW and LGMTS.

15.13.1.4. (Added) Consolidate and validate unit forecast requirements for selected TCIs. As a minimum, the validation will include ensuring all items are accounted for and total numbers of needed items are correct. The consolidation and validation will be completed prior to forwarding the forecast to all required agencies, to include HQ AETC/LGMT.

15.13.2.4.1. (Added) Each performing work center supervisor will ensure every TCI component is input into the MIS by part number, serial number, lot number, date of manufacture and/or installation, and position installed. In those cases where the lot number and the date of manufacturer do not match, refer to TO 11A-1-10, *Air Force Munitions Surveillance Program and Serviceability Procedures*, for guidance. Items replaced will be deleted from the database after the NRTS action has been documented or XB3-coded TCIs are replaced. When replacing components, ensure each new item is properly identified. This is extremely important for CAD/PAD items and engine modules where replacement frequency or type make series modification (TMSM) may vary for different part numbers or for designated -6 TO components for which historical documents are maintained.

15.13.2.4.2. (Added) For aircraft undergoing an acceptance inspection (transferred in from another unit or depot/speedline return), PS&D will load, change, or correct TCI data once maintenance has completed validation. Ensure proper documentation of TCI replacement according to 00-20 series TOs and AFCSM 21-568, *Time Compliance Technical Order (TCTO) Software User Manual*.

15.13.2.7. Identify the item in CAMS as "extended." For example, establish a new JST with the part number and serial number of the extended item reflecting the new due date. This will allow the unit to maintain the original due date and the approved extended due date. Recommend the extension message number be included in the discrepancy narrative of the extended event ID. Units using an approved MIS

other than CAMS will develop procedures to identify items as extended. The extension period becomes the new due time.

15.13.3. (Added) PS&D will initiate three copies of AETC Form 523 (or locally developed product) 60 days before the start of the month of an aircraft-scheduled inspection reflecting the inspection start date for each aircraft. Use long-range plans as the basis for completing AETC Form 523 and send a copy to PS&D, EM, and the inspection dock. E-mailed products are authorized. Ensure TCIs are requisitioned to coincide with the aircraft inspection date.

15.13.4. (Added) PS&D will verify the availability of TCIs with the MASO at least 30 days prior to the beginning of the month in which the required item is to be changed. Once notified that the part is available, incorporate the replacement in the weekly schedule.

15.13.5. (Added) Semiannually, PS&D will verify and update AF Form 68, **Munitions Authorization Record**, for the MASO according to AFI 21-101.

15.14. MOF PS&D will manage the aircraft configuration management (ACM) subsystem in the MIS and develop written guidance for reconciling, updating, and correcting aircraft configurations in the MIS database. For example, the egress function has responsibility for maintaining CAD/PAD items, and flight line avionics has responsibility for tracking LRUs. ACM provides unit managers the capability to determine the actual versus approved configuration of an aircraft. The intent of ACM is to ensure selected serial controlled and/or TCIs are properly loaded, tracked, and managed in the MIS database.

15.15.3.6. Egress system CAD/PAD verification inspections will be accomplished on newly assigned aircraft and upon those returning from depot or programmed depot maintenance (PDM) where the egress system has been worked on by depot personnel.

15.16. (Added) **Inspection Management.** PS&D will identify, monitor, project, and schedule aircraft inspection requirements into maintenance plans. EM will identify, monitor, project, and schedule engine life limited component inspection requirements into maintenance plans. Solid long-range plans with accurate inspection forecasting limits aircraft downtime and minimizes out-of-commission time.

15.16.1. (Added) **Inspection Recording:**

15.16.1.1. (Added) PS&D will load and monitor all aircraft scheduled and special inspection requirements within the MIS. A JST will be created for each scheduled and special inspection requirement listed in applicable TOs. EM will load all engine inspection requirements listed in the aircraft TOs and applicable engine TOs onto the JML. (AGE and armament schedulers will maintain their appropriate JML.) Inspection requirements with a frequency greater than 30 days or 50 hours will be loaded by a JST into the MIS and included in all maintenance planning cycles. For those inspection requirements with a frequency of less than 30 days or 50 hours, determine locally if a JST is required.

15.16.1.2. (Added) The inspection function will coordinate with PS&D or EM to ensure changes to inspection work cards are updated in the JML. For special inspections accomplished on selected components and assemblies requiring entry on AFTO Form 95, work center supervisors will ensure the accuracy of MIS inputs prior to PS&D or EM processing the suspense validation.

15.16.2. (Added) **Inspection Scheduling.** Aircraft will be input into inspection according to the + (plus) or - (minus) standards designated in their appropriate -6 TO.

15.16.3. (Added) **Inspection Requirements.** Due to the type, variety, and frequency of different types of scheduled and special inspections, each must be monitored, projected, and scheduled for accomplishment

by PS&D or EM while paying particular attention to aircraft returning from PDM. PS&D is the focal point for scheduled maintenance actions and is responsible for developing unit schedules that merge operational requirements and maintenance capabilities. Accurate schedules assist units in meeting utilization (UTE) rates and maintaining MICAP rates.

15.16.4. (Added) **Forecasting and Preplanning Scheduled Inspections.** At least 30 days before the start month of an aircraft inspection and on a cycle equal to or greater than the HPO or HSC, PS&D will initiate an AF Form 2410, completing blocks 1 through 13 and 15 through 17 (KC-135 exception for HSC). AETC Form 523 (or similar locally developed product) may be used as an aid in preparing the AF Form 2410. The following sequence of events will be used to forecast and preplan scheduled inspections:

15.16.4.1. (Added) The PS&D will forward the AF Form 2410 to EM, either in a hardcopy or e-mail format.

15.16.4.2. (Added) EM will annotate all engine-related TCTOs, TCIs, inspections, or any major or minor maintenance action required during the aircraft's scheduled downtime. After completion, the AF Form 2410 will be returned to PS&D.

15.16.4.3. (Added) PS&D will review all known aircraft TCTOs, TCIs, special inspections, and delayed discrepancy data (planned or workable) and incorporate this data into the inspection work package. Known availability of parts and/or kits required to complete scheduled actions will be identified on AF Form 2410.

15.17. (Added) **Fleet Time Management:**

15.17.1. (Added) **Planning Procedures for Annual Fleet Time Management:**

15.17.1.1. (Added) Fleet time management is only applicable to aircraft using hourly-based phases or PE inspection programs. However, all aircraft, regardless of their inspection method, can benefit by balancing the flying commitment across the entire fleet.

15.17.1.2. (Added) Fleet time is the average number of flying hours per aircraft remaining until the next scheduled inspection. Plan the annual inspection dock flow to parallel the annual flying hour program as closely as possible, using the total PE or PH inspection required for the fiscal year. A prudent plan considers current fleet time posture and number of required inspections based on the flying hour program and the unit's desired fleet time posture. Large month-to-month fluctuations in the annual flying hour program should be balanced with inspection hours produced over a 2- or 3-month period. This procedure will help eliminate the accordion effect of spreading and bunching aircraft PE hours on the MIS TDI report.

15.17.1.3. (Added) Spreading and bunching flying hours between aircraft creates the potential for several aircraft to run out of inspection hours at close to the same time. This will cause a PE dock backlog or not having any aircraft with low enough PE hours remaining until inspection, leaving the dock empty for a period of time and causing the average fleet time to drop. The key to success is managing individual aircraft flying hours, ensuring an equal mix of long and short deck inspections, and using realistic planning factors.

15.17.2. (Added) **Goal.** The goal of fleet time management is to ensure a balanced inspection dock flow that will support the AETC programmed allocation (PA) (the official flying hour allocation document) of flying hours without over- or under-tasking dock resources.

15.17.3. (Added) **Fleet Time Computations.** Compute and report average fleet time according to AETCI 21-105. Compute PE or PH inspections by dividing the PA by the inspection interval. To identify

the total number of PE or PH inspections required for the coming year, take the annual PE or PH inspections required to support the PA, plus or minus the inspections required to align the average fleet time at the beginning of the fiscal year with the AETC required minimum average.

15.18. (Added) **Deferred Discrepancy Management:**

15.18.1. (Added) **Deferred Discrepancies.** A deferred discrepancy is a minor discrepancy on an aircraft or item of equipment that cannot be corrected within 3 duty days. This includes nonlife-sustaining TCIs that are past their due date and overdue -6 TO inspections to include washes. Deferred discrepancies are separated into three distinct categories: awaiting maintenance (AWM), awaiting parts (AWP), and awaiting depot (AWD), as follows:

15.18.1.1. (Added) AWM discrepancies are deferred discrepancies awaiting funds, manpower, facilities or equipment. AWM deferred discrepancies recorded against an aircraft or AGE will be scheduled and corrected as soon as possible, but no later than the next PE, ISO, or PH inspection, unless an extension is approved by the contracting officer (for contract maintenance units) or maintenance supervisor (for military or civil service maintenance units). If further clarification is required to specify discrepancies that are AWM, make an entry in the discrepancy block in the MIS.

15.18.1.2. (Added) AWP discrepancies are discrepancies deferred due to nonavailability of assets. AWP discrepancies must have a valid dueout date established.

15.18.1.3. (Added) AWD discrepancies are beyond unit capability and are deferred AWD input. Develop an AWD work center code in the MIS so AWD discrepancies are separated from AWM and AWP write-ups and not counted in AWM and AWP rates.

15.18.2. (Added) **Maintaining Automated AWM Discrepancies.** The owning flight or section will ensure all deferred discrepancies are input in the MIS and updated, completed, or scheduled through PS&D. If scheduled maintenance actions are not completed prior to the next scheduled flight or by the end of the 24-hour forecast period, the owning flight or section will reschedule the event. During aircraft document reviews, the owning flight or section will resolve any differences between the aircraft forms and the deferred listing.

15.18.3. (Added) **Maintaining Automated AWP Discrepancies.** The performing flight or section will:

15.18.3.1. (Added) Use its shop code to ensure a demand is made on supply for all assets needed to complete AWP deferred discrepancies and discrepancy data is input in the MIS.

15.18.3.2. (Added) Ensure the supply data is loaded into the MIS by the maintenance supply liaison (MSL), FAST, or authorized maintenance function.

15.18.3.3. (Added) Ensure assets ordered have the same EID as the original maintenance discrepancy.

16.1.3. Specify lead crews with certification and/or decertification authority. **NOTE:** The Luke AFB weapons manager is authorized to designate a three-person crew to augment the load standardization crew (LSC) for the purpose of performing evaluations and certifications (including quarterly evaluations [QE]) as required by this instruction. As a minimum, this crew must be comprised of personnel assigned to the weapons standardization (WS) and all three members must possess at least a 5-skill level. The weapons manager will use the same criteria to select this crew that would be considered in designating LSC team members.

16.1.16. Provide performance levels, by squadron, to the QA office for inclusion in the quality assurance program (QAP) summary, and if required, to PS&D for inclusion in monthly maintenance summaries.

16.1.20. Refer to paragraph 4.8.6.6. of this supplement for specific guidance on LME.

16.1.25. Provide the following information monthly to HQ AETC/LGMW: (**NOTE:** This report will be compiled from existing unit files and/or databases and is exempt from RCS reporting per AFI 33-324, *The Information Collections and Reports Management Program; Controlling Internal, Public, and Inter-agency Air Force Information Collections.*)

16.1.25.1. (Added) Quantity of testers by part number, stock number, quantity authorized, quantity on hand, and quantity on order (including off-base requisition numbers). Identify status of each tester; for example, serviceable, unserviceable, AWM, AWP, etc. Include nomenclature, part number, stock number, and off-base requisition number for parts on order. Provide any appropriate remarks.

16.1.25.2. (Added) AME, NIE, handling equipment, and other weapons or gun system support equipment assigned by equipment noun, quantity authorized, quantity on hand, quantity serviceable, quantity unserviceable, and remarks. Identify any significant difficulties associated with obtaining equipment, parts, or repairs. **NOTE:** Equipment is considered in commission if there are no discrepancies or parts required (to include TCTOs) that would hinder performance of the intended function. Equipment is not considered out of commission just because it is undergoing scheduled, preventative, or minor maintenance.

16.1.34. (Added) Designate the number of load crews each tasked squadron must identify in primary and alternation positions on applicable mobility listings. (These crews must maintain certification at all times on primary munitions [PM] designated in the unit committed munitions list [UCML].) The number of load crews will be based on a review of unit taskings and approved by the MXG commander. Once established, the number of load crews will be published in the unit appendix to the UCML.

16.1.35. (Added) Coordinate with the munitions activity to establish an instruction governing accountability of munitions to meet flight line requirements.

16.1.36. (Added) Determine the tasks associated with “Red X-limited” certification of AFSC 2W1XX personnel as it applies to the unit special certification roster and requirements of this publication.

16.1.37. (Added) Ensure the quantity of AFSC 2W1XX supervisors authorized to use CAMS screens 45 and 46 (non-JDD installation and removal) is limited to a minimal amount required to perform required documentation in each weapons section.

16.2. In AETC, the WS function only applies to Luke and Tyndall AFBs. The WS will conduct the unit load crew certification and weapons task qualification programs and is the focal point for all related matters. The WS will provide all academic and practical training, including explosive safety, required to load munitions on aircraft.

16.2.2.22. (Added) Ensures the Air Force munitions policy (AFI 21-101, Chapter 1) is considered in the development of weapons load training procedures.

16.2.2.23. (Added) Develops a list of prerequisite training that must be completed by load crewmembers prior to being certified to load or unload munitions.

16.2.2.24. (Added) Ensures procedures are in place to verify that load crewmembers have completed all prerequisite training prior to beginning practical training for loading or unloading munitions.

16.4. The instructor will be a highly qualified AFSC 2W171 and may help conduct practical training.

16.12.1.7. (Added) Applicable station functional checks will be required during all initial certification and QE loads. If functional checks are not performed during minimum proficiency requirement loadings

(MPRL), time standards will be adjusted accordingly. Performance of functional checks during recertification of a decertified crew or crewmember is optional.

16.12.1.8. (Added) Certification is the act of verifying and documenting a person's ability to load a particular type of aircraft, munition, or munitions family group (MFG) within established standards as follows:

16.12.1.8.1. (Added) Initial certification is the first time a person is certified in his or her current duty assignment. Initial certifications include applicable aircraft functional checks.

16.12.1.8.2. (Added) Recertification is the certification of a person who has been decertified for any reason. Recertification may be done with or without aircraft functional checks at the discretion of the evaluators.

16.12.1.9. (Added) Quarterly, semiannual, or annual intervals are periods of 3, 6, or 12 calendar months, respectively. For example, a quarterly requirement accomplished any time in February is due the last day of May.

16.12.2.2. The LSC will review each situation at the 90-day point to determine if the individual or load crew should retain certification.

16.15. In AETC, load crew integrity must be maintained for quarterly evaluations evaluated by the LSC. Units with a limited quantity of PMs may use limited-use munitions (LM) to satisfy the LSC QE requirement if a PM is used for the first LSC QE following an initial certification (crew or individual) and an LSC QE is performed on all PMs during the year following the initial certification. An LSC QE must be performed on each PM; an MFG will not satisfy this requirement. Crews undergoing initial certification or recertification of one or more members must perform an LSC QE during the quarter in which they are certified regardless of other members' LSC QE dates. The LSC QE due date for newly formed crews composed of three currently certified members is the earliest due date of the three members. **NOTE:** No more than one quarter may elapse between LSC QEs unless the crew is coded out for reasons specified in AFI 21-101.

16.17. Request help from HQ AETC/LGMW if requirements cannot be met.

16.19. (*Luke and Tyndall AFBs only*) WS is responsible for managing the weapons task qualification program. Conduct initial training on properly configured aircraft suitable for use; do not perform any other maintenance on the aircraft during training. Document training in the weapons load crew management program (WLCMP), if used, or the MIS. Weapons task qualification trainers will be fully qualified AFSCs 2W151 or civilian equivalents. (**NOTE:** Each weapons task qualification item uses a separate course code.) Personnel will be trained and qualified on using applicable checklists; performing applicable functional and/or stray voltage checks; and performing delayed flight, alert, or immediately prior to launch (IPL) procedures, as applicable. Additionally, personnel will be trained and qualified on using, installing, and removing weapons system safety devices; using, installing, and removing munitions item safety requirements and devices; knowing the location of the weapons system explosive items used to jettison and/or release external stores; and knowing the location and safe configuration of cockpit armament switches.

16.20.1.4. (Added) Three or more persons in AFSC 2W1X1 or civilian equivalent are required to load TGM-65 training missiles.

16.20.2.5. For munitions requiring certification, both persons must be AFSC 2W1X1 except during actual or exercise contingency operations. Only one qualified person in any maintenance AFSC is

required to perform (immediately prior to launch) missile isolation and safing procedures on captive air training missiles (CATM) 7, 9, and 120.

18.2.4. Units may use AETC Form 666, **Change to Inspector/Special Certification Listing**.

18.5.3. For contractor operated and maintained base supply (COMBS)-supported aircraft, only the director of maintenance (or the deputy during an absence) can authorize cannibalization actions for COMBS-provided parts. Canning COMBS-provided parts will only be done as a last resort.

18.6.2.1. Aircraft are exempt from accruing Hangar Queen time for up to 10 days immediately following depot or contract field team repair or maintenance to allow for aircraft recovery.

18.6.2.2.1. The following examples illustrate possible Hangar Queen scenarios:

18.6.2.2.1.1. (Added) **Example 1.** A possessed aircraft (possession purpose identifier code [PPIC] TF or ZB) has not flown for 10 days. It is placed in training (PPIC TJ) for 30 days. At the point the PPIC changes to other than TF or ZB, the days accumulating toward Hangar Queen status reporting stops. Next, the aircraft is reassigned PPIC TF and does not fly for 20 additional days. It has now accumulated a total of 30 calendar days in the assigned purpose code and is reported and managed as a category 1 Hangar Queen.

18.6.2.2.1.2. (Added) **Example 2.** A category 1 Hangar Queen (30 days) is put in PPIC DM due to unscheduled depot maintenance for a total of 15 days. In this case, the aircraft would not accumulate any additional Hangar Queen days and is exempt from further Hangar Queen reporting, but category 1 Hangar Queen management controls would still apply. When the aircraft reverts back to PPIC TF or ZB, it again begins accumulating Hangar Queen days and reporting resumes as a category 1 Hangar Queen (31 days).

18.6.3. Report aircraft in Hangar Queen status per guidance in AETCI 21-105.

18.11.6.3. Annual recertification is required for Mobility Air Force (MAF) units.

18.11.7. Not applicable for MAF units.

18.15.1. Additionally, this section outlines the maintenance management requirements for AETC training equipment. It applies to AETC organizations responsible for performing on- and off-equipment maintenance on training and training support equipment, to include training wings (TRW), training groups (TRG), and training detachments (TD). Specific procedures for TDs are identified in Chapter 18 of this supplement.

18.15.2.1. AETC group commanders with trainer maintenance activities assigned will develop an instruction to identify the specific application of policies and procedures outlined in AFI 21-101 and as supplemented. The instruction will detail the interface between the trainer maintenance activity and supported school activities and will include all specific programs, operating procedures, and requirements applicable to the trainer maintenance activity. Further, this instruction should be used in the development of work statements. The group commander will determine the extent to which policies, procedures, programs, and requirements outlined in AFI 21-101 and this supplement apply to the trainer maintenance activity. Compliance with specific procedures outlined for ground instructional trainer aircraft (GITA) listed in AFI 21-101 is mandatory. **NOTE:** Contracted trainer maintenance activities are not bound by any of the organizational structure requirements outlined in AFI 21-101 or this supplement. As a minimum, each trainer maintenance activity will include the following functions, programs, policies and/or processes to the extent determined by the group commander:

18.15.2.1.1. (Added) Programs and policies contained in AFI 21-101, Chapter 1, if applicable.

18.15.2.1.2. (Added) Procedures for functions identified in AFI 21-101, Chapters 3 and 4 (AGE, armament, fabrication, etc.), if applicable.

18.15.2.1.3. (Added) MOC, if used.

18.15.2.1.4. (Added) Quality assurance or control (AFI 21-101 and the contractor quality program accepted by the government).

18.15.2.1.5. (Added) Maintenance documentation (specify local documentation procedures and requirements).

18.15.2.1.6. (Added) Supply support.

18.15.2.1.7. (Added) Tool and equipment management.

18.15.2.1.8. (Added) Maintenance scheduling (ensure TCTO and TCI procedures are outlined).

18.15.2.1.9. (Added) TO management.

18.15.2.1.10. (Added) Cannibalization program.

18.15.2.1.11. (Added) Product improvement.

18.15.2.1.12. (Added) Training and certification requirements (includes special certification, engine run, etc.).

18.15.2.1.13. (Added) Foreign object damage (FOD).

18.15.2.1.14. (Added) Unique maintenance procedures.

18.15.2.2. The responsible group commander will provide support for training devices designed or manufactured by AETC for which AETC provides logistics support (AETCI 21-109, *Maintenance Management Trainer--Development*).

18.15.2.2.1. This determination is made in coordination with the training school.

18.15.2.2.6. Provide 2 AF/LR and the applicable logistics support function an informational copy of all memorandums.

18.15.2.2.11. (Added) Ensures required inspections and maintenance are performed.

18.15.2.3. The systems to be maintained on “permanently” grounded aircraft are identified on the aircraft utilization and requirements listing published in coordination with the school activity and trainer maintenance activity.

18.15.3.1. Training equipment developed by AETC (or other command trainer development activities) will be maintained in accordance with the technical manuals supplied by the trainer development activity.

18.15.3.2. Any deviations to technical data requirements for configuration-controlled training equipment or systems must be coordinated with the applicable single manager.

18.15.3.4. (Added) Trainers with no established inspection requirements must be inspected annually unless specifically exempted by the commander. A master listing of items exempt from inspection requirements will be maintained and reviewed annually. Source documents for exempt items will be maintained by the QA function.

18.15.4.2. (Added) Maintenance performed by training school personnel need not be documented in the MIS. The school activity is responsible for developing procedures to ensure this type of maintenance is

documented and cleared in accordance with the 00-20-series TOs. These procedures must be coordinated with the trainer maintenance activity and should be included in the operating instruction required by paragraph 18.15.2.1, basic publication.

18.15.5.2.2. Include 2 AF/LR and the unit logistics support function (if applicable) on all coordination.

18.15.5.2.3. (Added) In coordination with the trainer maintenance activity, the commander of the training school to which the GITA is assigned will review and approve the save list. Ensure items to be removed are not required for training and will not disfigure the appearance of the GITA. After the items on the save list have been removed and turned in, any further removal and turn-in must be coordinated with the applicable logistics support function and approved by 2 AF/LR.

18.15.6. (Added) **Squadron Commander Responsibilities.** Squadron commanders (or contract program managers at contracted units) are responsible for managing the maintenance function. They will:

18.15.6.1. (Added) Ensure support for the maintenance mission is included in plans, programs, and host tenant agreements.

18.15.6.2. (Added) Ensure training equipment is operational to support resident and TD training courses.

18.15.6.3. (Added) Coordinate on the monthly training schedule (when it is published separately from the maintenance plan).

18.15.6.4. (Added) Approve the items of equipment exempt from annual inspection requirements. At contracted activities, this must be coordinated with the functional director or commander; the responsibility may not be delegated.

18.15.6.5. (Added) Ensure maintenance actions are documented in the MIS in accordance with applicable 00-20-series TOs.

18.15.6.6. (Added) Ensure applicable AETC trainer maintenance goals and standards are met.

18.15.6.7. (Added) Ensure maintenance is performed in accordance with applicable technical data.

18.15.6.8. (Added) Ensure deviations from technical data maintenance and/or inspection requirements on configuration-controlled trainers or systems are coordinated with the applicable single manager.

18.15.7. (Added) **Training School Maintenance.** Training equipment will normally be assigned to the training school. Training school personnel are responsible for performing required operator or user inspections per applicable technical data and Air Force and AETC directives. Training school personnel may also perform minor maintenance (such as replacing fuses and lamps, tightening nuts and bolts, and cleaning) within the limitations of available tools and technical data.

18.15.8. (Added) **Training Equipment Management.** (982 TRG TDs only) This paragraph prescribes procedures for managing training equipment at 982 TRG TDs. Commanders must be thoroughly familiar with the TD support mission and functionally manage the local planning, scheduling, controlling, and directing of maintenance in support of that mission. The 82 TRW commander has prime responsibility for all TD trainers.

18.15.8.1. (Added) **TD Commander Responsibilities.** TD commanders will ensure the accomplishment of maintenance for equipment assigned in support of the training mission. TD personnel will perform all maintenance within their capability. Assistance in performing maintenance beyond TD capability may be requested according to this publication and applicable 00-series TOs. Each TD will perform the functions of maintenance operations and QA to the degree required for effective maintenance management. The

host commander will provide additional support in these areas as outlined in this supplement and as negotiated in support agreements. As a minimum, TD commanders will:

18.15.8.1.1. (Added) Ensure sound and effective maintenance practices are implemented within the TD. Institute a maintenance management program, designating TD instructor responsibilities in specified areas to ensure timely and effective completion of required maintenance actions.

18.15.8.1.2. (Added) Require strict adherence to technical data and management procedures.

18.15.8.1.3. (Added) Ensure timely accomplishment of TCTO kit-proofing.

18.15.8.1.4. (Added) Take necessary actions to move TD equipment as required.

18.15.8.1.5. (Added) Designate, in writing, supervisory personnel to clear Red-X conditions on training equipment.

18.15.8.1.6. (Added) Negotiate with the host commander to establish procedures for obtaining maintenance and funding support.

18.15.8.1.7. (Added) Refer training equipment maintenance problems beyond the capability of the TD, host-unit commander, and CLS contract through 373 TRS/TXFM to 82 MXS/LGML.

18.15.8.1.8. (Added) Ask for depot assistance, as required, according to TO 00-25-107 through the 82 MXS/LGML or training resource function.

18.15.8.1.9. (Added) By message, coordinate TD equipment cannibalization requests from non-982 TRG activities to satisfy host requirements with the 373 TRS/TXFM and 82 MXS/LGML. (TD commanders will not approve cannibalization of TD trainers.)

18.15.8.1.10. (Added) Ensure a listing of all LRUs, AGE, and TD test equipment is furnished to 373 TRS/TXFM personnel who will, when requested, provide a copy to the 82 MXS/LGML or training resource function for commodity TCTO management.

18.15.8.1.11. (Added) Designate, in writing, supervisory personnel authorized to sign DD Form 1577, **Unserviceable (Condemned) Tag - Materiel**; DD Form 1577-2, **Unserviceable (Reparable) Tag - Materiel**; DD Form 1574, **Serviceable Tag - Materiel**; AF Form 979, **Danger Tag**; AF Form 980, **Caution Tag**; and AF Form 981, **Out of Order Tag**.

18.15.8.1.12. (Added) Ensure compliance with the local hazardous material management program.

18.15.8.2. (Added) **Maintenance Management Program.** The TD commander will designate instructors to monitor and ensure timely and effective maintenance is performed. Functional responsibilities may be assigned as multiple monitor duties if unit size warrants. In all cases, an alternate monitor should be assigned in all areas to ensure continuity. Maintenance functional responsibilities include technical data monitor, configuration management and modification monitor, trainer utilization and maintenance documentation monitor, equipment inspection scheduling monitor, QA, and instructors. (See paragraphs [18.15.8.3. \(Added\)](#) through [18.15.8.8. \(Added\)](#) for details of these responsibilities.)

18.15.8.3. (Added) **Technical Data Monitor Responsibilities.** This monitor will:

18.15.8.3.1. (Added) Establish a TO account according to TOs 00-5-1 and 00-5-2.

18.15.8.3.2. (Added) Coordinate with the host base QA or quality control (QC) to establish requirements for inspecting TD TO files.

18.15.8.3.3. (Added) Review and manage AFTO Forms 22, **Technical Manual (TM) Change Recommendation and Reply**, according to TO 00-5-1 and this supplement. Forward AETC trainer-related forms through the TD QA monitor for review to the 82 MXS/LGML for approval. Route all other forms through the host quality control or support function. For TOs maintained under a CLS contract, submit AFTO Forms 22 directly to the CLS project officer.

18.15.8.3.4. (Added) Review the numerical index and requirements tables to ensure currency of technical data.

18.15.8.3.5. (Added) Ensure control of locally developed checklists and workcards (TO 00-5-1).

18.15.8.3.6. (Added) Furnish TCTOs on weapons systems to the TD QA for review.

18.15.8.3.7. (Added) Forward commodity TCTOs received to the TD QA for review. Maintain a copy of the TCTO until it is accomplished.

18.15.8.3.8. (Added) Ensure TD supervisors are notified of changes to WUC manuals, work cards, and checklists.

18.15.8.3.9. (Added) Maintain a record of reference and in-use code manuals, work card decks, and checklists to monitor due dates of currency verification inspections.

18.15.8.3.10. (Added) Inventory TOs according to TOs 00-5-1 and 00-5-2.

18.15.8.4. (Added) **Configuration Management and Modification Monitor Responsibilities.** This monitor will:

18.15.8.4.1. (Added) Ensure cannibalization between TD-possessed trainers is properly documented, approved by the training manager, and coordinated with the 373 TRS/TXFM and 82 MXS/LGML.

18.15.8.4.2. (Added) Ensure TCTOs and modifications are accomplished as follows:

18.15.8.4.2.1. (Added) On notification from the documentation section (by DD Form 1348-1A) that a TCTO kit was shipped from the documentation section, ensure the kit is not charged to the host base supply account. If the kit was not received within 30 days of the shipping date, notify the documentation section.

18.15.8.4.2.2. (Added) Ensure instructors personally inventory the contents of TCTO kits against the TCTO parts list. Handle shortages according to TO 00-5-15. On receipt of TCTO kits, notify the documentation section by message of any shortages in those kits and receipt of items to alleviate any shortages.

18.15.8.4.2.3. (Added) Coordinate with the host base for help completing the TCTO if accomplishment is beyond TD capability. Notify the 82 MXS/LGML and 82MXS/MAMD if assistance cannot be obtained.

18.15.8.4.2.4. (Added) Ensure TCTO accomplishment as soon as possible after receipt of the complete kit, parts, or tools. Refer to Table 2-1 of TO 00-5-15 to determine service removal dates. Send requests for deviation to the documentation section with a complete justification.

18.15.8.4.2.5. (Added) Ensure documentation of TCTO action (including work done by depot or contractor teams and kit proofing) are entered on the appropriate AFTO forms. Notify the documentation section, with an informational copy to the 82 MXS/LGML and 82MSX/MAMD by message or e-mail, of completed or partially completed TCTO actions. Ensure the message includes the TCTO number, status (partial or complete), and serial number of the training equipment or commodity item. If partial compliance is

being reported, include the reason for the partial compliance with an estimated date for completion. Report compliance status changes the same way. The documentation section will enter TCTO actions into the MIS.

18.15.8.4.3. (Added) Document compliance with command-directed modifications, using the procedures in paragraphs **18.15.8.4.2. (Added)** through **18.15.8.4.2.5. (Added)** (DoDI 5000.2, *Operation of the Defense Acquisition System*). Substitute the title of the command-directed modification for the TCTO number in the completion message.

18.15.8.5. (Added) **Trainer Utilization and Maintenance Documentation Monitor Responsibilities.** This monitor will:

18.15.8.5.1. (Added) Ensure a trainer inventory is accomplished and reported according to AFI 21-103.

18.15.8.5.2. (Added) Ensure trainer forms and records are maintained according to TO 00-20-5.

18.15.8.5.3. (Added) Establish a trainer document file for each engine and item of training equipment on the master listing. Maintain this file with the training equipment, to include:

18.15.8.5.3.1. (Added) Active AFTO Forms 244 or 781-series, as applicable.

18.15.8.5.3.2. (Added) Serial number detail listing (AFCSM 21-568, Volume 2), when received from the 82 MXS/MAMD documentation function.

18.15.8.5.3.3. (Added) Until the updated history is received, duplicate copies of AFTO Forms 349, **Maintenance Data Collection Record** (or automated products), messages, or e-mails sent to the documentation section confirming TCTO compliance.

18.15.8.5.3.4. (Added) Automated history listing or duplicate AFTO Form 95 and other documents, as applicable.

18.15.8.5.3.5. (Added) Complete inventory listing to include all support equipment, recoverable components, and trainer baseline TOs.

18.15.8.5.4. (Added) Validate completed AFTO Forms 244 and 781-series, as applicable, for accuracy and completeness before forwarding them to the documentation section for filing.

18.15.8.5.5. (Added) Obtain a nonreporting work center code from the host production analysis activity.

18.15.8.5.6. (Added) Obtain a block of EIDs from the host plans and scheduling activity and ensure submitted AFTO Forms 350 include assigned EIDs.

18.15.8.5.7. (Added) Ensure maintenance actions are entered on AFTO Forms 244 as prescribed by TO 00-20-5.

18.15.8.5.8. (Added) Furnish a block of EIDs to the TD QA for use in documenting discrepancies found during inspections.

18.15.8.6. (Added) **Equipment Inspection Scheduling Monitor Responsibilities.** This monitor will:

18.15.8.6.1. (Added) Ensure inclusion of TD training equipment, SE, and test, measurement, and diagnostic equipment (TMDE) requiring calendar inspection in equipment inspection scheduling program.

18.15.8.6.2. (Added) Create a master listing or database product of assigned equipment and required inspections, using one of the following:

18.15.8.6.2.1. (Added) A MIS listing with ID numbers furnished by the host unit (AFCSM 21-564, Volume 2, *Status and Inventory Reporting, Software User Manual*).

18.15.8.6.2.2. (Added) An automated AGE scheduling program distributed and managed by the Air Force Logistics Management Agency, Gunter AFB AL.

18.15.8.6.2.3. (Added) A local product for managing, scheduling, and tracking non-Category 1 training equipment preventive maintenance inspections.

18.15.8.6.3. (Added) Ensure one copy of the master listing or database product is reviewed, verified, and validated by the TD commander or chief. Ensure the listing is forwarded to the host agency within 5 days after creation or receipt.

18.15.8.6.4. (Added) Ensure TMDE items requiring calibrations are processed through the host base PMEL or TMDE branch. Use the applicable PMEL or TMDE branch product to manage, schedule, and track TMDE items.

18.15.8.6.5. (Added) Ensure calendar inspections or calibrations are performed. After completion, enter the next due date in red or update the listing.

18.15.8.6.6. (Added) Maintain a training equipment status control board or log (which may be automated) for all assigned reportable training equipment per AFI 21-103. Information must include a serial number, type, current supply status, expected time in commission (ETIC), and remarks column. The TD commander will determine the status of other training equipment and SE to be displayed.

18.15.8.7. (Added) **QA Responsibilities.** The QA will:

18.15.8.7.1. (Added) Perform spot-check quality evaluations on trainers, mockups, and AGE items, ensuring (as a minimum) that each item is inspected at least annually. Inspection findings will be documented on either AF Form 2419, **Routing and Review of Quality Control Reports**, or AF Form 2420, **Quality Control Inspection Summary**. Document Red-X discrepancies on AFTO Form 244, using EIDs. Route the appropriate evaluation documentation device through the TD commander (or designated representative).

18.15.8.7.2. (Added) Obtain a block of EIDs from the TD maintenance data collection monitor for use in documenting discrepancies discovered during QA quality evaluations.

18.15.8.7.3. (Added) Help instructors perform transfer or acceptance inspections of training equipment.

18.15.8.7.4. (Added) Review TCTOs received with instructors to ensure required modifications to training equipment are included. If modifications are not included but are required, notify the documentation section. (Send information copies to the 82 MXS/LGML and 82 MXS/MAMD.)

18.15.8.7.5. (Added) When required, submit trainer materiel deficiency reports through the host quality function (TO 00-35D-54). Send information copies to the 82 MXS/LGML and 373 TRS/TXFM.

18.15.8.7.6. (Added) When required, submit AFTO Forms 22 through the host quality function to the logistics support function for approval.

18.15.8.7.7. (Added) Inspect all trainer forms at least once each quarter to ensure accurate and effective documentation of maintenance actions. Bring errors to the attention of the responsible instructor. Annotate the inspection in the supervisory review block of AFTO Form 244 for training equipment. Annotate inspections of GITAs on a separate AFTO Form 244 and insert the form in the AFTO Form 781-series maintenance forms folder for the applicable GITA.

18.15.8.7.8. (Added) Check completed AFTO Forms 244 and 781-series, as applicable, for accuracy and completeness before forwarding them to the documentation section.

18.15.8.8. (Added) **Instructor Responsibilities.** Instructors will assist in the performance of spot-check quality evaluations and perform maintenance within their capability. Additionally, they will:

18.15.8.8.1. (Added) Report all unsatisfactory equipment conditions through QA (TO 00-35D-54).

18.15.8.8.2. (Added) Submit modification proposals, as required, through the configuration management and modification monitor. No modification will be authorized unless approved by the owning command or the ALC having engineering and support responsibility for the affected equipment.

18.15.8.8.3. (Added) Document all maintenance on AFTO Form 349 or automated products according to TO 00-20-5.

18.15.8.8.4. (Added) Maintain current applicable equipment status forms as required by TO 00-20-5. Keep these forms on the training equipment.

18.15.8.8.5. (Added) Accomplish trainer equipment inventory reporting according to AFI 21-103.

18.15.8.9. (Added) **TCTO Kit-Proofing.** Accomplish TCTO kit-proofing at TDs as directed by HQ AETC. Coordinate through 82 MXS/LGML and 82 MXS/MAMD. In addition, identify required actions beyond the capability of the TD and host unit.

18.15.8.10. (Added) **Movement of Training Equipment.** When 82 MXS/LGML, 373 TRS/TXFM, 2 AF/LR, or HQ AETC/LGSWE directs movement of equipment, the applicable unit commanders will ensure the following actions are taken:

18.15.8.10.1. (Added) The losing unit will:

18.15.8.10.1.1. (Added) Perform a transfer inspection according to TOs 00-20-1 and 00-20-5 to include a power-on operational check of all powered trainers.

18.15.8.10.1.2. (Added) Completely inventory items, using the applicable trainer TO. Annotate shortages (to include support equipment) on trainer records and include the turn-in documents in the trainer documentation file.

18.15.8.10.1.3. (Added) Clean and condition-tag the equipment to be moved.

18.15.8.10.1.4. (Added) Include applicable trainer TOs, manuals, and trainer document files with the shipped equipment.

18.15.8.10.1.5. (Added) Ensure trainer covers and shipping containers are marked with proper identification and information as directed by the 82 MXS/LGML and 373 TRS/TXFM equipment monitors.

18.15.8.10.1.6. (Added) Inform the host chief of supply and transportation officer of the impending movement.

18.15.8.10.1.7. (Added) Delete the items of equipment from the master equipment ID listing and the equipment schedule at the end of the month of transfer.

18.15.8.10.1.8. (Added) Ensure the transfer of unaccomplished TCTO kits is according to TOs 00-5-15 and 00-20-1.

18.15.8.10.1.9. (Added) Initiate a loss message in accordance with AFI 21-103 within 48 hours after turning equipment over to host agencies for shipment.

18.15.8.10.1.10. (Added) Notify the 82 MXS/LGML and 373 TRS/TXFM of all movements.

18.15.8.10.2. (Added) The gaining unit will:

18.15.8.10.2.1. (Added) Perform an acceptance inspection in accordance with TOs 00-20-1 and 00-20-5 to include a power-on operational check of all powered trainers.

18.15.8.10.2.2. (Added) Perform a complete inventory of items received, using applicable trainer TOs and the trainer documentation file. Report shortages to the 82 MXS/LGML and 373 TRS/TXFM for followup action, as necessary.

18.15.8.10.2.3. (Added) Notify the host chief of supply of received equipment.

18.15.8.10.2.4. (Added) Add received equipment to the master equipment ID listing and MDS equipment schedule through the host base, using ID numbers provided by the training resource function equipment monitor.

18.15.8.10.2.5. (Added) Initiate a gain message according to AFI 21-103 within 48 hours after receiving equipment. Notify the 82 MXS/LGML and 373 TRS/TXFM of all movements.

18.15.9. (Added) **Non-GITA Aircraft.** Maintenance requirements for non-GITA aircraft used for training are determined locally and will meet the minimum requirements for trainers as outlined in AFI 21-101 and this supplement. **NOTE:** Any operational systems being used will be maintained per applicable technical data.

18.18.2. (Added) If an AETC aircraft in UPT, SUPT, pilot instructor training, undergraduate navigator training, or introduction to fighter fundamentals becomes NMC while off station (other than at an Air Force base that has the capability), the owning unit will be responsible for providing necessary support within 300 highway miles of the owning unit. This will be determined by using the defense table of official distances, which is the DoD official source of driving distance information. This table can be accessed at <http://dtod-mtmc.belvoir.army.mil>.

18.18.2.1. (Added) Outside of 300 highway miles, the AETC base closest to an off-station NMC aircraft (with maintenance capability for the specific MDS aircraft) will furnish all support, including personnel, equipment, components, and supplies necessary to repair the aircraft regardless of which unit possesses it.

18.18.2.2. (Added) All other AETC aircraft that do not fall in the categories listed in paragraph **18.18.2. (Added)** or **18.18.2.1. (Added)** will follow the procedures outlined in TO 00-20-5.

18.18.3. (Added) Following notification, units will dispatch required maintenance crews, supplies, TOs, and SE by the next normal duty day. When multiple AETC aircraft require off-station support by a single base, priorities will be negotiated between the owning and supporting base to minimize negative mission impacts. As a minimum, when AETC NMC off-station aircraft are within 300 highway miles of the supporting base, maintenance crews will be dispatched and will begin performing required maintenance on the aircraft not later than the beginning of the third duty day following the notification. For each additional 350 highway miles, or portions thereof, an additional duty travel day will be allowed. The owning and supporting base will reconcile unique requirements (transportation, cannibalization, budget, etc.).

18.18.4. (Added) If a unit deploys aircraft to another location for the purpose of flying sorties, the owning unit is responsible for recovering NMC aircraft at the deployed location.

18.21.1.1. In addition, group and support commanders will conduct a unit self-inspection program at least annually.

18.23.2.4. C-130 throttle quadrants will also remain installed as close to crew show as possible.

18.23.9. The FOD monitor will receive training from wing safety on mishap reporting procedures and requirements. The FOD monitor will also assist wing safety in mishap investigations.

18.23.9.1. The MXG/CC will designate a POC within QA to serve as the maintenance activity POC for mishap and incident reporting. The MXG/CC will ensure notification to HQ AETC/LGMTP in writing identifying the unit's FOD prevention program POC. The POC will ensure coordination between the appropriate group commander and wing safety on mishap reports affecting aircraft or maintenance.

18.23.9.1.1. (Added) If the commander concurs with wing safety's recommended maintenance actions in the mishap or incident report, the actions will be initiated after wing safety transmits the final mishap report.

18.23.9.1.2. (Added) If maintenance does not concur with wing safety recommendations, the MXG/CC will submit justification for nonconcurrence to HQ AETC/LGM within 5 workdays and send an information copy to HQ AETC/SEF or SEG, as applicable.

18.23.9.5. HQ AETC/LGMTP will resolve any questionable FODs.

18.23.9.6. Report FOD incidents to HQ AETC/LGMTP using AETC Form 199, **Foreign Object Damage (FOD) Incident Investigation**.

18.23.9.7.1. The MXG commander will initiate formal reporting to HQ AETC/LGM according to AFI 91-204, *Safety Investigations and Reports*, for any incident, mishap, failure of an engine-rotating component (turbine or compressor components), explosive or missile mishap, dropped object, FOD, or unusual occurrence that results in damage to aircraft, aircraft components, AGE, and maintenance facilities and/or injury to personnel. Specific mishaps will be reported to the designated office as follows:

18.23.9.7.1.1. (Added) For an aerospace equipment mishap, incident, or unusual occurrence during normal duty hours, the MA (for contract activities) or maintenance supervisor will notify the appropriate HQ AETC/LGMA airframe section by telephone within 3 hours.

18.23.9.7.1.2. (Added) The MXG/CC will ensure FOD and engine mishap or incidents are reported to HQ AETC/LGMTP by telephone within 3 hours.

18.23.9.7.1.3. (Added) After duty hours, the MA or maintenance supervisor will telephone the appropriate HQ AETC/LGM section at the start of the next duty day.

18.23.9.7.1.4. (Added) If formal reporting is not required by AFI 91-204, any aircraft or maintenance-related unusual occurrence or significant event will be reported to the appropriate HQ AETC/LGM section.

18.23.11.5.1. Report dropped objects to HQ AETC/LGMA within 3 hours during duty hours or at the beginning of the next duty day if after hours. When possible media interest is determined, the dropped object prevention (DOP) monitor will ensure the local command post accomplishes initial dropped object BEELINE reporting according to AFMAN 10-206, *Operational Reporting*.

18.24.1.2. Perform periodic radar warning receiver (RWR)/radar threat warning (RTHW) checks for non-contingency operations as outlined in applicable -6 TOs.

18.26.1. To ensure program integrity and responsiveness are maintained and personnel remain highly proficient, the MXG commander or MA (for contract maintenance units) will keep the number of personnel authorized to the minimum level needed to adequately support mission requirements.

18.26.1.1. Refer to AETCI 21-103.

18.26.1.2.1. Flight chiefs (or civilian equivalents) will select qualified technicians, mechanics, or workers to perform engine start and runup duties. Squadron maintenance officers or superintendents (or civilian equivalents) will approve personnel selections.

18.26.5.3.7. **NOTE.** For rotary-wing aircraft initial training, the initial engine run training will consist of a three-phase program: phase I--academic instruction; phase II--power off and power on practice; and phase III--engine run evaluation and certification. Simulator or CPT training is not required for initial engine run qualification on UH-1, H-53, and H-60 helicopters. Units conducting engine run training will use a locally devised helicopter and engine run training syllabus.

18.26.5.4. (Added) The following specific engine runup limitations apply:

18.26.5.4.1. (Added) Maintenance engine runs in the aircraft parking area will not exceed 75 percent power for a T-37 and T-38 aircraft, 80 percent of N2 power for T-1 and T-43 aircraft, and 30 percent torque for T-6 aircraft. Ground maintenance engine operations will be performed above 75 percent power one engine at a time.

18.26.5.4.2. (Added) T-37 aircraft may be run at 80 percent in the parking area to parallel generators only. Engine maintenance runs at above 75 percent power will be performed on an approved installed engine operation test facility (trim pad, sound suppresser, or hush house).

18.26.5.4.3. (Added) Maintenance personnel will not operate T-38 engines above 75 percent power unless the aircraft is properly secured on an approved test facility.

18.26.5.4.4. (Added) Maintenance personnel will not operate T-6 engines above 30 percent torque unless the aircraft is properly secured on an approved T-6 trim pad.

18.26.5.4.5. (Added) Units possessing MDS aircraft (other than T-37, T-38, T-1, T-43, and T-6) will establish local MOIs or wing instructions identifying approved engine run sites and restrictions to include revolutions per minute or power limitations for parking areas.

18.26.5.4.6. (Added) For jet engine maintenance runs at other than home station where an approved test facility does not exist, engine runs above 75 percent must be approved by local airdrome officials. The runup areas provided must have a clear area of at least 200 feet in front of and directly behind the aircraft.

18.26.5.4.7. (Added) The MXG commander or MA will designate maintenance runup areas at AETC auxiliary fields where engine maintenance runs are required on a recurring basis for recovery of aircraft. The operator is responsible for ensuring main gears are chocked, the area behind the aircraft is not flammable, and the area in front is clear of foreign objects.

18.26.5.4.8. (Added) On a single-seat MDS if an individual running the aircraft is in a training status, the trainer will maintain visual and voice contact via the intercom system. On an MDS with two or more seats, the instructor will be located in the cockpit with the trainee.

18.26.5.4.9. (Added) A firefighting vehicle must stand by in the immediate vicinity when an aircraft is being run in an isolated area (to be determined by the fire chief according to AFI 32-2001, *The Fire Protection Operations and Fire Prevention Program*). A firefighting vehicle will also stand by in the immediate vicinity during engine runs for fuel or oil line and component leak checks if deemed necessary by the maintenance supervisor. When running engines in a hush house, a fire truck need not be available if the hush house halon fire suppression system is fully operational. These are minimum requirements and will be supplemented by local MOIs or other publications, as required.

18.26.6. **NOTE.** Seatbelts and shoulder harnesses are not required to be fastened for engine maintenance ground runs on T-1, T-6, T-37, T-38, T-43, F-15, and F-16 aircraft.

18.26.10. Proficiency will be maintained by performing at least one engine run every 90 days. Track this requirement either manually or in the MIS. Personnel who do not maintain proficiency will be decertified.

18.26.11. Maintenance personnel will not taxi aircraft. **EXCEPTION:** Maintenance personnel (FAA-certified mechanics only) at Keesler AFB are permitted to taxi C-21 aircraft.

18.26.17.5. (Added) Qualified hush house personnel will complete the following actions before any aircraft is run in the aircraft hush house: (**NOTE:** These are minimum procedures and will be supplemented with MOIs or other publications, as required.)

18.26.17.5.1. (Added) Perform aircraft pre-run inspection and preparation procedures according to applicable aircraft operational TOs.

18.26.17.5.2. (Added) Brief personnel involved in the aircraft run of all run hazard areas.

18.26.17.5.3. (Added) Secure all doors leading from the hush house aircraft bay to equipment rooms and operations room.

18.26.17.5.4. (Added) Assign responsibility to each person manning the fire bottles.

18.26.17.5.5. (Added) Inform personnel of the evacuation plan in case of fire system activation.

18.26.17.5.6. (Added) Perform FOD inspection of the entire runup area.

18.26.17.5.7. (Added) Establish ground communication between the aircraft operator, ground person, and control room operator prior to engine start. (Properly secure the ground communication cord.)

18.27.2.2. Conduct at least 50 percent of these checks before first launch of the day using either operational or maintenance codes.

18.28. Sortie generation operations (SGO) only apply to fighter wings who elect to use SGO as a means to generate aircraft for tasked, planned, or actual contingency exercises and/or operations.

18.28.1. Dual loading operations (DLO) are not authorized in AETC.

18.28.3. The MTF is responsible for course development and administration of training and tracking qualification of concurrent servicing supervisors. The following requirements apply:

18.28.3.1. (Added) Ensure sufficient quantities of personnel are identified to support exercise or actual contingency operations.

18.28.3.2. (Added) Ensure sufficient quantities of personnel maintain qualification on anticipated SGOs to provide a training base in the advent of actual or potential contingency operations. As a minimum, each tasked squadron will maintain annual qualification on a select number of concurrent servicing supervisors as determined by the MXG commander.

18.28.3.3. (Added) Coordinate and ensure transportation and supply procedures are developed to support unit requirements for combat operations, to include personnel, equipment, and vehicles.

18.28.3.4. (Added) Implement supply procedures for accountability and control of spares provided to support maintenance activities during combat and/or contingency operations.

18.28.3.5. (Added) Coordinate refueling procedures that meet the employment training base requirements.

18.28.5.1. The wing commander will:

18.28.5.1.1. (Added) Develop the capability to perform the employment operations that would be required at the primary wartime employment base for which the wing is tasked.

18.28.5.1.2. (Added) Publish an OI (or supplement) to provide guidance for conducting, training, and managing the wing combat sortie generation program.

18.28.5.1.3. (Added) Ensure the wing is trained in SGO procedures to be used at the employment base.

18.28.5.1.4. (Added) Ensure required maintenance and load crew personnel tasked for augmentation (for example, security forces) and other wing or base details are returned to their respective work centers during unit exercises and/or actual contingency operations.

18.28.5.2.4. (Added) Establishes procedures to meet briefing and debriefing requirements for aircrew, flight, intelligence, and weather during combat employment operations and exercises.

18.28.5.2.5. (Added) Ensures exercise requirements are considered and included in flying hour allocations.

18.28.5.2.6. (Added) Establishes procedures to meet aircraft maintenance requirements for SGO.

18.28.5.2.7. (Added) Coordinates indirect support procedures to provide necessary food services, sanitation, and medical services to personnel involved in SGO.

18.28.8.1. Each AETC wing will conduct a sufficient number of exercises to maintain combat capability equivalent to unit tasking. Exercises will include tasked flying units and selected base support elements with wartime tasking. All elements of the wing sortie generation capability must be realistically exercised.

18.28.12. Reload ammunition after each firing sortie.

18.28.13. (Added) Forecast and request munitions requirements to support exercise tasking not later than 120 days (for the continental United States [CONUS]) and 180 days (for outside the continental United States [OCONUS]) before each major exercise. Refer to AFI 21-201 for munitions allocation transfer procedures. Contact the host munitions activity no later than 90 days before the planned exercise to ensure munitions allocations are on hand to support the exercise tasking. If assets are not available 30 days before the planned exercise, identify potential shortfalls up the chain of command to the servicing munitions activity.

18.28.14. (Added) Sortie generation exercises are designed to train personnel, refine procedures, and provide a measurement of a unit's capability to generate combat sorties. The objective of these exercises is to develop the capability to turn combat aircraft and crews rapidly. In developing procedures, AETC units will communicate with their employment base sponsor unit regarding requirements to support combat SGOs. AETC units will design sortie generation procedures suited for individual bases, based on joint support plan information containing descriptions of available facilities, communication, and base diagrams. For realistic training, only those assets mobilized and available at a deployed beddown location should be used. Training will be oriented to train by individual squadron.

18.28.15. (Added) Units will develop training scenarios that include special mission requirements (for example, fuel tank installation, special munitions loading) as appropriate for their expected tasking.

18.28.16. (Added) If applicable, operations will be conducted from an isolated and/or deployed location. Unit participants are limited to only those aircrew and support personnel comprising the deployed unit

type code and those personnel specifically designated for host base support functions. Tail number integrity will be maintained and generated. Deployed tail numbers will be the only aircraft available for employment sorties.

18.28.17. (Added) If required by operational plan (Oplan) tasking, night sorties will be scheduled during each exercise.

18.28.18. (Added) During initial generations, demonstrate munitions delivery and loading capabilities by loading one third of tasked primary assigned aircraft per unit with ammunition. Full ammunition loads may be simulated by cycling at least 25 rounds of ammunition through the gun system, or, if the gun system is already loaded, by cycling in the bypass mode, ensuring adequate spacing between 25-round minimum sections in the ammunition loading system to accurately simulate full load timing. For fully loaded ammunition loading systems, simulate full loads by cycling in bypass for a minimum of 5 minutes. After completing these loads, unit aircraft may be considered fully loaded.

18.29. The following AETC forms are prescribed:

AETC Form 55, **Oil Analysis Program (OAP) Data Listing**

AETC Form 138, **Lost Tool/Chit Investigation Record**

AETC Form 199, **Foreign Object Damage (FOD) Incident Investigation**

AETC Form 229, **Intermediate Repair Enhancement Program Asset Profile**

AETC Form 246, **Inspection Workcard Control**

AETC Form 403, **Landing Gear/Flight Control Malfunction History**

AETC Form 453, **Nondestructive Inspection History**

AETC Form 520, **Engine Maintenance and Inspection Forecast**

AETC Form 523, **Aircraft Scheduled Inspection Forecast**

AETC Form 666, **Change to Inspector/Special Certification Listing**

AETC Form 1042, **CTK Tool Checklist**

AETC Form 1158, **Cannibalization Control Register**

AETC Form 1236, **Request for Improving/Changing AETC Maintenance Regulations/Instructions**

18.30. (Added) **Forms Adopted.**

DD Form 1348-1A, **Issue Release/Receipt Document**

DD Form 1574, **Serviceable Tag - Materiel**

DD Form 1577, **Unserviceable (Condemned) Tag - Materiel**

DD Form 1577-2, **Unserviceable (Reparable) Tag - Materiel**

DD Form 2026, **Oil Analysis Report**

DD Form 2027, **Oil Analysis Record**

AF Form 15, **United States Air Force Invoice**

AF Form 68, **Munitions Authorization Record**

AF Form 813, **Request for Environmental Impact Analysis**

AF Form 979, **Danger Tag**

AF Form 980, **Caution Tag**

AF Form 981, **Out of Order Tag**

AF Form 2005, **Issue/Turn-In Request**

AF Form 2410, **Inspection/TCTO Planning Checklist**

AF Form 2413, **Supply Control Log**

AF Form 2414, **Verification Worksheet**

AF Form 2419, **Routing and Review of Quality Control Reports**

AF Form 2420, **Quality Control Inspection Summary**

AF Form 2426, **Training Request and Completion Notification**

AF Form 2430, **Specialist Dispatch Control Log**

AF Form 2434, **Munitions Configuration and Expenditure Document**

AF Form 2521, **Turnaround Transaction Log**

AFTO Form 22, **Technical Manual (TM) Change Recommendation and Reply**

AFTO Form 95, **Significant Historical Data**

AFTO Form 244, **Industrial/Support Equipment Record**

AFTO Form 245, **Industrial/Support Equipment Record (Continuation Sheet)**

AFTO Form 255, **Notice Certification Void When Seal is Broken**

AFTO Form 349, **Maintenance Data Collection Record**

AFTO Form 350, **Repairable Item Processing Tag**

AFTO Form 781A, **Maintenance Discrepancy and Work Document**

AFTO Form 781H, **Aerospace Vehicle Flight Status and Maintenance**

AFTO Form 781J, **Aerospace Vehicle Engine Flight Document**

AFTO Form 781K, **Aerospace Vehicle Inspection, Engine Data, Calendar Inspection and Delayed Discrepancy**

AETC Form 206, **Monthly Flying Contract**

18.31. (Added) **Verification Procedures for CADs/PADs:**

18.31.1. (Added) CAD/PAD verification and validation will ensure the data recorded in the MIS corresponds with the items installed on the ejection seat, canopy, and aircraft. An optional method of maintaining CAD/PAD verifications is to provide P&S and egress a shared drive where read-only, password-protected PRAs are posted. The focus of the CAD/PAD verification is to ensure the MIS is always correct.

18.31.2. (Added) As a minimum, CAD/PAD components and harnesses installed on non-Advanced Concept Ejection System II (ACES II) will be validated during major PEs. ACES II CAD/PAD components will be validated during the 36-month seat inspection. Verification of ACES II and non-ACES II CAD/PAD installed components will be limited to visually accessible items. Drogue chute verifications will be done during chute repacks by the survival equipment function. T-38 inertia reels do not require removal for the sole purpose of obtaining information from the rotary actuator.

18.31.3. (Added) Egress will correct any discrepancies discovered in the MIS during the verification procedures outlined in paragraph 18.28.4, basic publication. Egress will request a current MIS egress-only PRA from the database manager and provide PS&D a signed, verified, and updated copy of the PRA. Egress sections using CAMS may utilize screen #257, *Egress Configuration Listing*, in place of the PRA.

18.31.4. (Added) Egress personnel will reconcile the data listed on their CAD/PAD verification sheet (extracted from the installed components) with the data listed on the existing PRA filed in the work center file. The minimum data requiring verification are the component part or serial number, lot number, position installed, date of manufacture, date of installation, date of expiration, egress indicator, and time change frequency listed in applicable 11A- or 11P-series TOs.

18.31.5. (Added) If the data matches (that is, no errors or omissions are noted), egress will request an updated MIS egress-only PRA from the database manager to ensure the accuracy of CAD/PAD components and harnesses recorded in the MIS. The egress technician or supervisor performing the verification will sign all copies of the current PRA and forward one copy to PS&D to file in the aircraft jacket file. File the original in the egress work center for subsequent verifications.

18.31.6. (Added) If errors or omissions are noted before the aircraft's next scheduled sortie, the egress technician or supervisor performing the verification will update the MIS to match what is actually installed. Annotate the correct data in red on the existing PRA and place the PRA in a suspense file. Request an updated MIS egress-only PRA, ensure the corrections have been made to the MIS, sign all copies, forward a copy to PS&D, and dispose of the suspense copy. Retain the original in the egress work center for subsequent verification.

18.31.7. (Added) PS&D will review the corrected PRA for any TCI due dates that may change as a result of an incorrect database. Current TCI forecasts will be for accuracy and an adjusted forecast submitted as required. PS&D will file the signed PRA in the aircraft historical record file.

18.31.8. (Added) When egress components are replaced between major PEs, egress will update the existing PRA or equivalent online CAMS product (in red ink) with the new information and complete the event ID in the MIS creating a suspense for PS&D to clear. At a minimum, maintain this manually updated egress product until the next scheduled 36-month inspection for ACES II seats, major PE, 2-year inspection, and acceptance inspection. At that time, request a current updated MIS egress-only product, ensure all red entries and updates have been made to the data base, sign all copies, forward a copy to PS&D, and dispose of the suspense copy. Retain the original in the egress workcenter for subsequent verifications.

18.32. (Added) **Aircraft Vibration Signature/Trend Analysis:**

18.32.1. (Added) **General.** The aircraft vibration signature/trend analysis program improves both aircraft performance and reliability. Eliminating excessive vibration also extends the life of the airframe and associated components. A viable program contributes to improved troubleshooting and identifying components that cause vibration problems. This allows the aircraft to be quickly repaired and returned to fully mission capable status. The AETC Vibration Program Management Office (VPMO) provides vibration

signature/trend analysis, familiarization and orientation training for track and balance, vibration signature acquisition/analysis and fleet-wide database management. The AETC VPMO is located at Kirtland AFB NM, in hangar 1001, island C, room 208, and can be reached at DSN 246-5067.

18.32.2. (Added) **Procedures:**

18.32.2.1. (Added) Accomplish an initial vibration signature on all newly assigned aircraft before releasing an aircraft for normal operations. **NOTE:** This may be waived if aircraft availability will hinder mission accomplishment (see paragraph [18.32.7.2. \(Added\)](#)).

18.32.2.2. (Added) A depot facility or DFT will accomplish a vibration signature on all aircraft before input for PDM, on condition maintenance (OCM), depot-level maintenance, or any scheduled modification that will affect structural or dynamic components. This may be accomplished up to 2 weeks before depot input.

18.32.2.3. (Added) Accomplish vibration signatures on all aircraft upon completion of any depot work, prior to the aircraft being released for normal operations. The unit vibration program manager, after coordination with the VPMO, may waive this requirement on a case-by-case basis.

18.32.2.4. (Added) Accomplish vibration signatures on all aircraft prior to PH/ISO inspection. This may be accomplished up to 2 weeks or 50 flight hours (whichever is greater) before input into the PH/ISO inspection. If an aircraft is NMC for this period, the vibration signature is waived. If waived, the waiver authority will place an entry in the aircraft forms stating the signature is waived with a reference to the grounding NMC discrepancy that required the waiver and notify the VPMO (see paragraph [18.32.7.2. \(Added\)](#)).

18.32.2.5. (Added) Accomplish vibration signatures on all aircraft upon completion of the PH/ISO inspection and before the aircraft is released for normal operations. **NOTE:** This may be waived if aircraft availability will hinder mission accomplishment (see paragraph [18.32.7.2. \(Added\)](#)).

18.32.2.6. (Added) Accomplish vibration signatures within 15 duty days any time a major rotating component is changed on a helicopter.

18.32.2.7. (Added) Accomplish an abbreviated vibration signature on the oil cooler and engine drive shafts when performing a 250-hour vibration check on HH-60G aircraft.

18.32.2.8. (Added) Perform a complete vibration signature on all UH-1Ns modified by TCTO 1H-1(U)N-664, *Installation of Vibration Monitoring System Equipment, UH-1N Helicopters*.

18.32.3. (Added) **UH-1N Aircraft Components.** The major rotating components for the UH-1N aircraft are as follows:

18.32.3.1. (Added) Engine, combining, and/or accessory gearbox.

18.32.3.2. (Added) Forty-two degree gearbox (ground signature only).

18.32.3.3. (Added) Main drive shaft.

18.32.3.4. (Added) Main gearbox.

18.32.3.5. (Added) Main rotor head.

18.32.3.6. (Added) Tail drive shafts (ground signature only).

18.32.3.7. (Added) Tail gearbox (ground signature only).

18.32.3.8. (Added) Tail rotor head (ground signature only).

18.32.4. (Added) **HH-60G Aircraft Components.** The major rotating components for the HH-60G aircraft are as follows:

18.32.4.1. (Added) Drive shafts (ground signature only).

18.32.4.2. (Added) Engine and engine-mounted gearbox (input and accessory).

18.32.4.3. (Added) Intermediate gearbox (ground signature only).

18.32.4.4. (Added) Main gearbox.

18.32.4.5. (Added) Main rotor head.

18.32.4.6. (Added) Tail gearbox (ground signature only).

18.32.5. (Added) **MH-53J Aircraft Components.** The major rotating components for the MH-53J aircraft are as follows:

18.32.5.1. (Added) Accessory gearbox (AGB).

18.32.5.2. (Added) Drive shafts (tail, engine, and AGB) (ground signature only or download monitor after next flight).

18.32.5.3. (Added) Intermediate gearbox.

18.32.5.4. (Added) Main gearbox.

18.32.5.5. (Added) Main rotor head.

18.32.5.6. (Added) Tail gearbox.

18.32.5.7. (Added) Tail rotor head.

18.32.6. (Added) **C-130 Aircraft Components.** Accomplish vibration signature and/or propeller balancing within 15 duty days any time a major rotating component is changed on a C-130 aircraft. The major rotating components for the C-130 aircraft are as follows:

18.32.6.1. (Added) Engine power package (propeller balancing and signature).

18.32.6.2. (Added) Engine turbine (propeller balancing and signature).

18.32.6.3. (Added) Propeller (propeller balancing). **NOTE:** The propeller-balancing requirement may be waived by the vibration program manager with approval of the squadron maintenance officer (SMO) for weather or urgent operational needs for a maximum of 50 flight hours.

18.32.6.4. (Added) Reduction gearbox (propeller balancing and signature).

18.32.7. (Added) **Responsibilities.** The following guidelines should be adhered to as closely as practical. Any deviations should be reported to the VPMO.

18.32.7.1. (Added) PS&D will schedule the vibration signature to be accomplished before and after PH/ISO inspections, PDM, OCM, or DLM. In addition, any scheduled modification performed by a depot facility or DFT that will affect structural or dynamic components will require a signature.

18.32.7.2. (Added) Units will have a minimum of one primary and one alternate vibration program manager who have attended the 58 SOW vibration course for their MDS. A memorandum of appointment

from the commander will be provided to the VPMO. These individuals are the waiver authority for all deviations mentioned in this supplement.

18.32.7.3. (Added) The squadron's primary vibration program manager or alternate will ensure a fully qualified individual performs the entire signature/vibration analysis procedure and operates the vibration measuring equipment on all assigned aircraft and will forward all signature checks to the VPMO. All signature/vibration analysis will be performed in accordance with appropriate aircraft signature check guides and TOs. All corrective actions from aircraft signatures will be routed back to the VPMO.

18.32.7.4. (Added) The debrief will ensure each aircraft vibration discrepancy is annotated on a vibration debrief checklist (VDCL) (see [Attachment 10 \(Added\)](#)) and one copy of this checklist is entered into the aircraft forms and one copy is forwarded to the VPMO.

18.32.7.4.1. (Added) If the vibration is discovered in flight, the debriefer will ensure the aircrew completes the VDCL form and turns it over to the debrief section.

18.32.7.4.2. (Added) Upon receipt, the debrief section will forward a copy of the completed VDCL to the VPMO and the form will also be maintained in the aircraft forms until the vibration discrepancy is cleared.

18.32.7.5. (Added) The AETC VPMO will provide commandwide oversight of this program. This office will review all signature checks, provide recommendations when necessary, produce a quarterly summary report of all vibration discrepancies with corrective actions, and send the report to all unit vibration program managers and HQ AETC/LGMAS and LGMTP. The VPMO will also provide all necessary training to fulfill the requirements of this supplement.

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

OMB Circular A-76, *Performance of Commercial Activities*

DoDI 5000.2, *Operation of the Defense Acquisition System*

AFI 21-103/AETC Sup 1, *Equipment Inventory, Status, and Utilization Reporting*

AFCSM 21-559, Volume 2, *Automatic Test Equipment Reporting Systems (ATERS), Software User Manual*

AFI 31-101, *The Air Force Installation Security Program*

AFI 32-2001, *The Fire Protection Operations and Fire Prevention Program*

AFI 33-112, *Computer Systems Management*

AFI 33-324, *The Information Collections and Reports Management Program; Controlling Internal, Public, and Interagency Air Force Information Collections*

AFI 36-2201, Volume 3, *Air Force Training Program On the Job Training Administration*

AFI 38-203, *Commercial Activities Program*

TO 33-1-37-1, *Joint Oil Analysis Program Manual, Volume 1*

TO 35-1-246WC-1, *Periodic Inspection Workcards—Non-Powered Aerospace Ground Equipment Aircraft Servicing Equipment (FSC 1730) and Airfield Specialized Trucks and Trailers (FSC 1740)*

TO 35D6-1-106, *Periodic and Maintenance Instr—Aircraft and Engine Slings (General) and Restraining Devices*

TCTO 1H-1(U)N-664, *Installation of Vibration Monitoring System Equipment, UH-1N Helicopter AETC Standards of Installation Excellence*

AETCI 21-103, *AETC Military Aircraft Maintenance Training Program*

AETCI 21-104, *Aircraft Planning and Scheduling*

AETCI 21-105, *Logistics Performance Measures Reporting Procedures*

AETCI 21-107, *Maintenance Management—Maintenance Contract Surveillances*

AETCI 21-112, *AETC Civil Service and Contractor Aircraft Maintenance Training Programs*

AETCI 36-2201, *Training Evaluation*

Abbreviations and Acronyms

ACES II—Advance Concept Ejection System II

AGB—accessory gearbox

ASD—average sortie duration

AUC—aircraft utilization code

AWD—awaiting depot

BEM—base engine manager

BSSE—bench stock support element

CR—contractor regulation

DOM—director of maintenance

DR—document review

EIAP—environmental impact analysis process

EID—event identification designator

FA—functional administrator

FAST—forward asset support training

GAS—graduate assessment survey

HPC—historical property custodian

IBEMS—Integrated Base Engine Management System

ISU—issue

JOAP-TSC—Joint Oil Analysis Program-Technical Support Center

LRS—logistics readiness squadron

MA—maintenance authority

MAF—Mobility Air Force

MAQ—maximum authorized quantity

MIS—maintenance information system

MLIR—monthly logistics indicator report

MSE—maintenance scheduling effectiveness

MTO—maintenance training office

NF—nonexpendable equipment item

P&S—plans and scheduling

PA—programmed allocation

PAD—propellant actuating device

PE—periodic maintenance

PGM—precision-guided munition

PH—phase

PM—primary munition

PRA—planning requirement
QAE—quality assurance evaluator
RAM—reparable asset manager
RCAMS—Repair Cycle Asset Management System
RCSS—repair cycle support section
RFP—request for proposal
SGO—sortie generation operation
SMO—squadron maintenance officer
SUPT—specialized undergraduate pilot training
TEX—transaction exception
TMDE—test, measurement, and diagnostic equipment
TRG—training group
TRW—training wing
UL—underwriters laboratory
UPT—undergraduate pilot training
VCO—vehicle control officer
VDCL—vibration debrief checklist
WS—weapons standardization

Attachment 10 (Added)**VIBRATION DEBRIEF CHECKLIST**

This checklist is only a guide to help in troubleshooting. Please add any other information that will aid in our troubleshooting in the remarks section (item 10). These questions may seem repetitious, but your input is invaluable.

1. Aircraft Tail Number: _____ Date: _____
2. RPM: 100% NR 105% NR WEIGHT _____ lbs CG _____
3. What type of vibration did you feel? LOW MEDIUM HIGH VERTICAL LATERAL
4. Was the vibration constant throughout the flight? YES NO
5. Did the vibration get worse or better at some point during the flight? WORSE BETTER

At what point did the vibration get worse? (turns, refueling, climbs, descents, airspeed changes)

What flight regime was the vibration most pronounced?
6. Did the vibration get worse with airspeed increase/decrease?
7. Where was the vibration felt? FLIGHT DECK CABIN RAMP STATION NO. _____
8. Did you attempt to isolate the vibration? YES NO

What did you do?
9. Discrepancy:
10. Remarks:

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